Items of Interest

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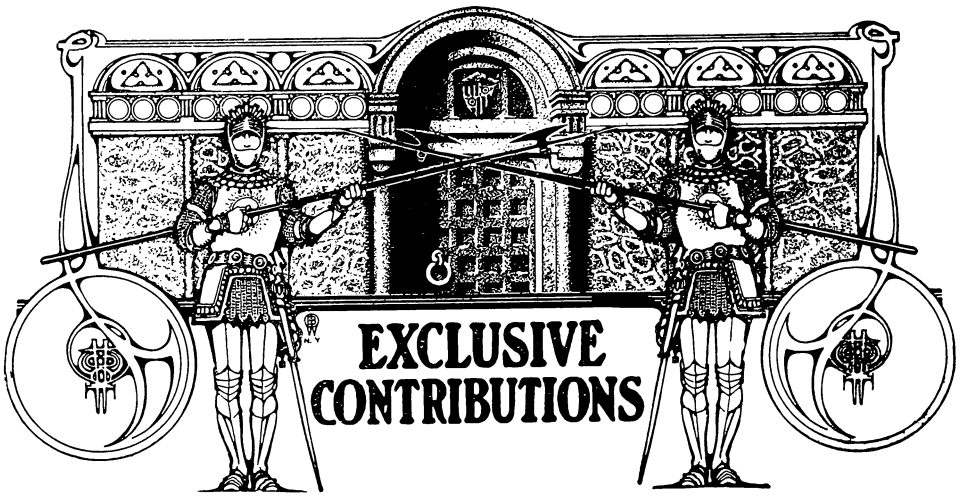


"Agglutinous" Substances as Prerequisites of the Formation of Salivary Calculus.

By Theo. von Beust, Dresden.

In the *Dental Review* for April, 1912, there appeared an article written by Dr. G. V. Black, on the "Deposit of Salivary Calculus," containing a number of photo-micrographs of an agglutinous deposit which the author had obtained, by means of an ingenious device, by subjecting cover glasses to the influence of the fluids of the mouth. The slides here shown, which were reproductions of a number published in the June issue of the Items of Interest, 1911, showed a deposit in different stages of development; a deposit which the investigator alleges to be derived from the saliva. According to the descriptions in these articles it is also devoid of form elements, and constitutes the basis for the deposition of the calcium salts which contribute to the formation of salivary calculus. Upon the nature of this gummatous material I take the liberty to offer a few comments.

Results of Investigations by the Author.

In experiments devoted to the study of the micro-organisms of the mouth, which have been carried on by the writer for some years, the anatomical characteristic of the soft deposits forming in the mouth were given special attention. Innumerable examinations of scrapings of different age, color and texture were made.

Material answering to the description of that studied by Dr. Black,—shiny, greasy, whitish and transparent, was repeatedly stained and examined. These investigations have induced the writer to regard the deposits forming in the mouth—on any surface—be it natural or artificial, to be nothing more nor less than colonies of micro-organisms.

In a contribution by the author to the *Archiv fuer Zahnheilkunde*, No. 3, 1906, is a statement which in the translation would read thus:

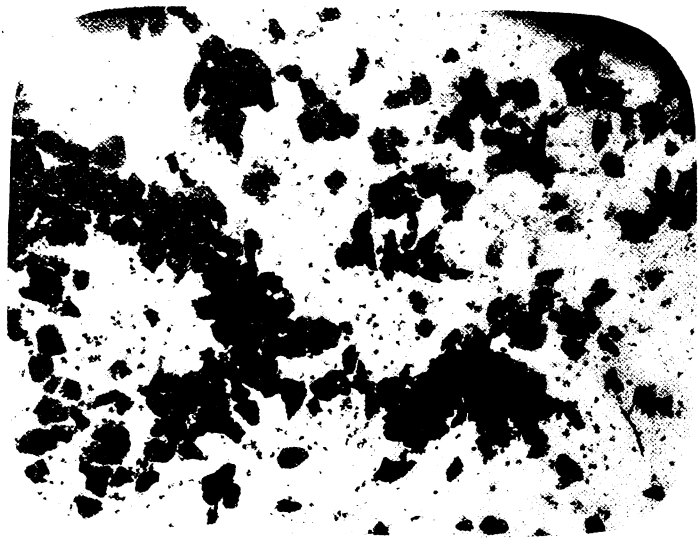


Fig. 1.

"One frequently hears the view expressed that the deposit upon the teeth consists principally of particles of food and epithelial cells, with a small admixture of bacteria. This, however, is not the case. Epithelial cells, and, in some cases, remnants of food, enter into its composition, the amount of these constituents, however, as compared to the contained bacterial elements, is exceedingly small . . . . it would appear that about 90 per cent. of the soft deposit consists of living micro-organisms."

Investigations made since the publication of the contribution here cited have led to no other conclusion, although it would appear from the experiment described below, that the cells of the epithelium, through their apparent faculty of attaching themselves to smooth surfaces, contribute more largely to the incipient formation of the deposit, by supplying a favorable substratum, than was formerly supposed. In older deposits they are always present, the bulk of the mass, however, consists, as above

expressed, of colonies of micro-organisms. (Compare the remarks of the author upon the mucin constituents of colonies. Page 1264, *Dental Cosmos,* 1911.)

It was nothing short of a surprise to learn of Dr. Black's ideas concerning the substance under consideration. That, in the opinion of the writer, it is a prerequisite to the formation of salivary calculus, may be seen by referring to the article on "The Study of the Micro-organisms of

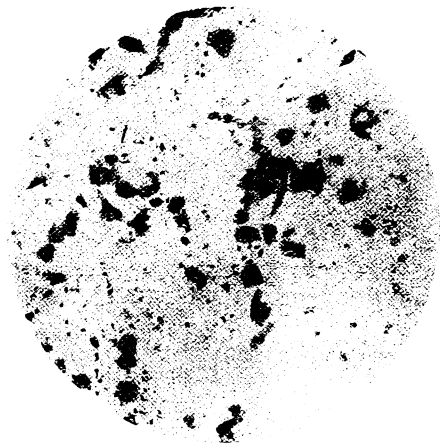


Fig. 1a.

the Human Mouth," which appeared in the *Dental Cosmos* for February, 1912, in which is stated: "Continued experiments have induced me to believe that the soft deposits covering the necks of teeth, which, after days or weeks, have become calcified, thereby forming dental tartar, consist mainly of these micro-organisms." The purport of this statement differs from Dr. Black's views only in so far as the nature of the deposit is concerned. In the closing paragraph of Dr. Black's article, on page 455 of the issue of ITEMS OF INTEREST cited above, we read: "When freshly deposited, this agglutinin is remarkably free from micro-organisms, but after twenty-four or thirty-six hours, immense numbers are found." This is the equivalent of saying that the deposit is formed *first.* It is the purpose of this contribution to throw some light upon this point.

Experiment by the Author.

Pending the insertion of two bicuspid crowns, the writer has for the past weeks worn a small gold plate. The arch being exceptionally high, a deposit resembling the material under discussion was seen

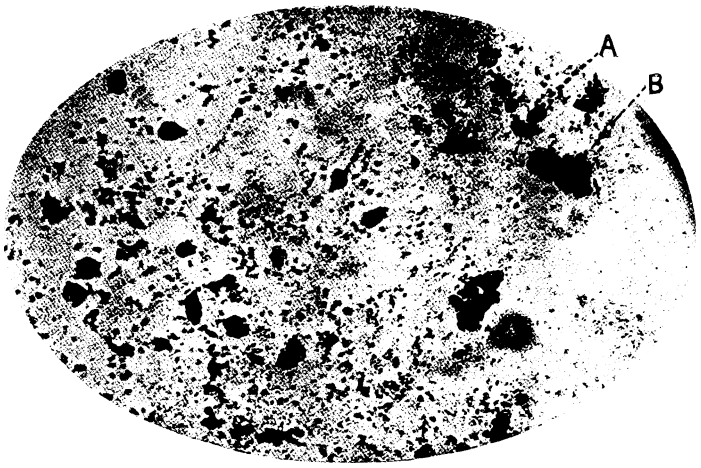


Fig. 2.

Fig. 3.

to form, regardless of daily brushing, on the lingual surface of the plate. To gratify a natural curiosity, and the matter appearing to be sufficiently important, a second gold plate was struck up and two frames, as utilized by Dr. Black, were soldered on either side of the arch. As the plate could be worn with perfect comfort, the following experiment was undertaken:

CONDITIONS PRESENTING

General health	Good.
Habits	Regular, plain food; coffee and tea in liberal quantities.
Condition	In need of rest, from overwork
Digestion	Good.
Appetite	Good (moderate eater). Thorough masticator.
Tobacco	One, at most two, strong cigars daily.
Alcohol	Very little, and not regularly
Soft deposits*	Paroxysmal, kept in check by careful brushing.
Salivary Calculus	Slight deposit at time of experiment.
Serumal Calculus	None.
Pyorrhea	None
Tongue	Slightly furred on the morning of the experiment.
Saliva	No apparent deviations from the normal.
Caries	Rampant; countless fillings; five crowns.

*The experiment was carried on during a paroxysm as shown by inspecting the artificial denture and teeth before brushing.

After rising at 7:30, the teeth were thoroughly brushed. Breakfast consisted of 62 grammes of wheaten bread, with butter and peach jam, three cups of coffee with sugar and cream. The plate carrying two new cover glasses was inserted at 10:30 A. M. These were renewed at 12 o'clock, and are designated in the following table as No. 1 and No. 1a, respectively. In the course of this, and in the subsequent experiments, the plate was retained. No food or drink was taken during its presence in the mouth.

TECHNICOLOGY

Cover glass	Time of Exposure	Treatment before fixing	Fixing fluid	*Staining fluid
No. 1	90 minutes	Was allowed to dry without being washed	Passed through 40, 60, 100% alcohol, 2 hours	Fuchin, 20 minutes
No. 1a	90 "	Same as above	Same as above	Methylene, blue, 20 minutes
No. 2	180 "	Washed in a dish of water	" " "	Fuchin, 20 minutes
No. 3	240 "	Washed under hydrant	" " "	Methylene, blue, 20 minutes

*The staining fluid was prepared by adding concentrated alcoholic stains to water in sufficient quantity to give a deep color. The washing of the stained specimens was accomplished by holding the coverglass in the pliers and passing through a dish of water sufficiently long to remove the free stained fluid.

Examination of No. 1: Epithelial cells singly and in groups. Leucocytes. Micro-organisms singly and in groups (beginning of formation of colonies). Small spots similar to those which appear when staining a loop of saliva which has been allowed to dry on the cover glass. Nothing more perceptible, under low or high powers.

Examination of No. 1a: Same as the foregoing.

After a simple lunch at 12:30, consisting of bouillon soup, roasted veal, stewed potatoes, spinach, apple-dumplings and one glass of Rhine wine, a large, strong Hamburger cigar was smoked through a holder containing a goodly amount of nicotine. Three cups of coffee, with sugar and cream, were taken while smoking, which lasted one and one-quarter hours. At 2:30 the plate was reinserted. At the end of three hours the first cover glass was removed (glass No. 2 of table).

Fig. 4.

Examination of No. 2: Resembled No. 1, excepting that more groups of cells and many more colonies of bacteria were present. The spots resulting from dried saliva were absent.

The second glass (glass No. 3 of table) was removed after four hours.

Examination of No. 3: More and larger colonies of bacteria. Less cells than in the foregoing. Otherwise no deviation from the above mentioned. No trace whatever of any material devoid of form elements.

Knowing precisely what the result would be (viz., the formation of still larger colonies), this line of experiments was discontinued. Dr. Black himself states that in older deposits bacteria are present. Scrapings of so many varieties of deposit had, moreover, been stained in studying the morphology of the microbes growing in the mouth so often and by so many methods, that further attempts on these lines seemed superfluous.

The results of this experiment, as well as the author's previous examinations, do not appear to indicate that unorganized or colloidal de-

posits, as described by Dr. Black, are commonly formed in the mouth. They do demonstrate, however, that any deposit upon the specified surfaces must be attended, from its very incipiency, by the activity of such a large percentage of micro-organisms, that their influence as causative factors cannot be disregarded.

Dental Radiography.*

By Howard R. Raper, D.D.S.,
Professor of Operative Technic and Roentgenology at Indiana Dental College, Indianapolis.

The Uses of the Radiograph in Dentistry.

CHAPTER VII—*Continued.*

38. To Observe Planted Teeth.

Figs. 241 and 242. Case: One in the practice of Dr. C. Edmund Kells, Jr., Fig. 241, shows a fracture of the root of a lateral, the result of a fall. After the two pieces of the lateral were extracted they were united and held together with an iridio-platinum screw set in cement, and the repaired root then replanted. The radiograph (Fig. 242) was made immediately after the operation. A gold splint is seen covering the crown of the cuspid, lateral and both centrals.

Fig. 243. A case of replantation of a lower second bicuspid two years and four months after the operation. The root is almost entirely absorbed. Notice how plainly the pericemental membrane can be seen about the roots of the first bicuspid and first molar, appearing as a light line. Notice also the absence of this line about the remaining portion of the root of the replanted tooth.

The theory of the attachment of planted teeth is as follows: The roots of the planted teeth are absorbed at different points, and bone immediately fills into these places, so holding the tooth. Hence, planted teeth do not have a pericemental membrane. Radiographic findings bear out this theory.

Fig. 244. Fig. 244 shows an implanted porcelain root. Observe that the root has practically no bony attachment at all, and would drop out save for the manner in which it is splinted to the other central.

Fig. 245.

Dr. E. G. Greenfield, Wichita, Kas., has designed and manufactured a sort of cage-like root of iridio-platinum wire to be used for implantation. So far all forms of artificial roots for teeth have proven failures, but this one

Fig. 241.

Fig. 242.

Fig. 241. Fracture of upper lateral incisor. (Radiograph by Kells, of New Orleans.)
Fig. 242. Same as Fig. 241 after the removal of the lateral and its replantation. Radiograph by Kells, of New Orleans.)

Fig. 243.

Fig. 244.

Fig. 243. A case of replantation of the lower second bicuspid two years and four months after the operation. The root is almost entirely absorbed. (Radiograph by Kells, of New Orleans.)
Fig. 244. Artificial porcelain root with no bony attachment at all save just at the apex. (Radiograph by Ream, of Chicago.)

bids fair to be a success. Whether it will be a success or not depends on whether or not bony tissue will build in and about the wires. The radiograph (Fig. 245) is introduced more for the purpose of showing the artificial roots than for any other reason. The radiograph has not been made

in such a way as to enable us to see whether there is an osseous deposit within the wires or not.

39. In Cases of Cementoma.

Cementomata (or cases of hypercementosis, as they are often called) are sometimes the cause of neuralgia. There are no means at our disposal whereby they (cementomata) can be diagnosed save by the use of the radiograph.

Fig. 245.

Fig. 245. Two artificial roots implanted in the upper jaw. (Radiographer not known.)

Figs. 246 and 247. These radiographs illustrate cementomata, which were responsible for persistent neuralgias. Extraction was necessary in both cases.

40. In Cases of Bone "Whorls."

The term, bone whorl, is used to designate particularly dense areas of bone occurring in bone. Bone whorls may be caused by a prolonged, mild irritation, like that produced by an impacted tooth, for example. They are sometimes responsible for facial neuralgia. In answer to a letter asking him if he ever found it necessary, or ever expected to find it necessary, to open into the bone and surgically break up whorls to relieve neuralgia, Dr. Cryer replies, "I have found it necessary in several cases to open into the bone and remove the whorls, or hard bone, and I fully expect to do

Fig. 246.

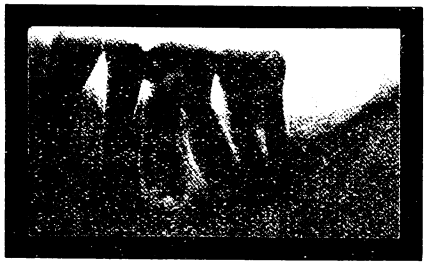


Fig. 247.

Fig. 246. Cementoma on lower, second, shell-crowned molar. (Radiograph by Ream, of Chicago.)
Fig. 247. Cementoma. (Radiograph by Ream, of Chicago.)

Fig. 248.

Fig. 248. An unerupted lower third molar. The arrow points to a bone "whorl." (Radiograph by Pancoast, of Philadelphia.)

Fig. 249.

Fig. 249. The same as Fig. 248 after the extraction of the lower second and third molars. The arrow points to a dark, three-sided shadow—a bone "whorl." The X on the shadow is caused by a scratch on the negative. (Radiograph by Pancoast, of Philadelphia.)

so again." From the nature and location of whorls, it is obvious that they can be found only by the use of the radiograph.

Figs. 248 and 249. A case in the practice of Dr. Cryer. The patient was suffering from pain on one side of the face. A radiograph of the case (Fig. 248) shows an impacted lower third molar. It was thought best to remove the second molar first, then the third molar. This was done, and the neuralgia disappeared for about ten days, then pain returned. Another radiograph (Fig. 249) was made which shows a bone whorl in the region from which the second molar had been removed. Another operation was done removing the whorl, after which the neuralgia disappeared altogether.

Case in the practice of Dr. Robert H. Ivy, of Philadelphia. "The patient had suffered from neuralgia of the mandibular division of the fifth nerve on the right side, for two years. In February, 1911, she was treated by an alcohol injection of this division, which gave relief from pain for six

Fig. 250.

Fig. 250.

Fig. 250. The dark shadow to which the arrow points is a bone "whorl." (Radiograph by Pancoast, of Philadelphia.)

months, after which the trouble returned, but not so severely as before. In January, 1912, a skiagram was made, showing a dense spot in the region of the first molar tooth, and in close relation to the inferior dental nerve. This is so dense as to appear like a piece of tooth root, but when cut down upon with the surgical engine, nothing but dense bone was found. The patient has been without neuralgia since the operation, though it is too soon yet to say whether the relief will be permanent."

41. To Locate Stones (Calculi) in the Salivary Ducts or Glands.

The history of this case given me by Dr. Sidney Lange, of Cincinnati, Ohio, is as follows: Patient, female, age about forty, suffered recurrent attacks of

Fig. 251.

swelling and pain in the region of the submaxillary gland on one side. The attacks seemed to follow the taking of sour foods. A radiograph (Fig. 251) was made. The arrow points to a stone in the submaxillary duct. Because the patient had had a stone removed from the same duct several years previously, and because the gland was considerably thickened, simple removal of the stone was thought to be contraindicated, and

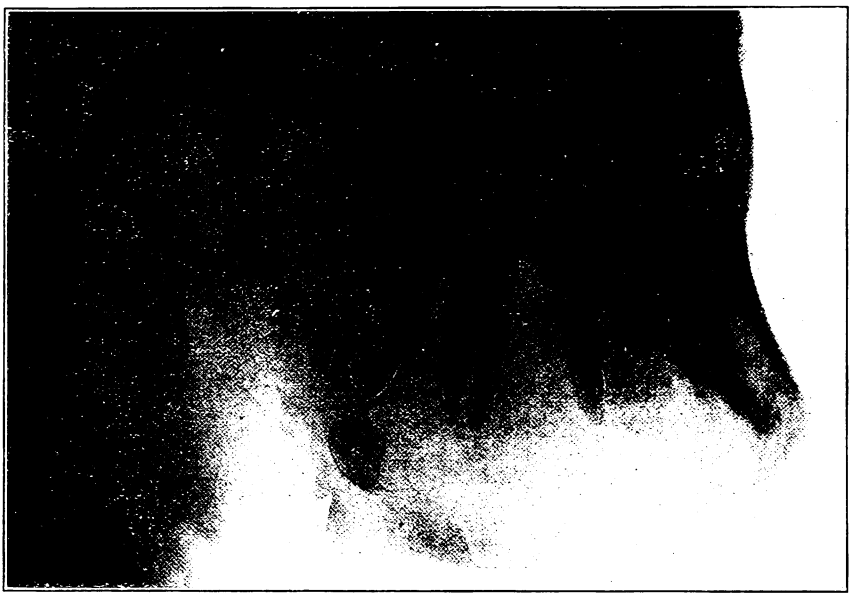


Fig. 251.

Fig. 251. The arrow points to a stone in the submaxillary duct. (Radiograph by Lange, of Cincinnati.)

a more radical operation involving the removal of the entire gland was performed.

42. In Cases of Bone Cysts.

"A cyst is an organized structure consisting of a sac-like wall together with its contents, especially one of pathological formation or abnormal development."—*Appleton's Medical Dictionary.*

According to this definition all chronic alveolar abscesses are cysts—bone cysts, because they occur in bone. But the name cyst is usually not applied until the abscess sac assumes a great size. The abscess in Fig. 193 is large enough to be called a cyst, in the generally used sense of the term.

Fig. 252. This radiograph shows a large cyst in the lower jaw. The two roots of the lower first molar are doubtless responsible for the cyst formation.

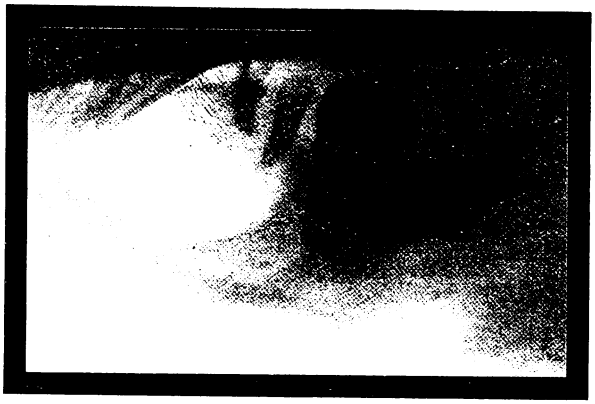


Fig. 252.

Fig. 252. Large cyst in the lower jaw. The more or less oval-shaped light area represents the cyst. (Radiograph by Lewis, of Chicago.)

Fig. 253.

Fig. 254.

Fig. 253. A bone cyst in the lower jaw.

Fig. 254. Same as Fig. 253, with the cyst outlined to enable the reader to observe Fig. 253 to better advantage. The circle A is the alveolus from which the second bicuspid was extracted.

In cyst cases there is often considerable and disfiguring enlargement of the bone, and such cases are spoken of as cystic tumors, a tumor, of course, being simply an abnormal enlargement or growth.

Figs. 253 and 254. A man, age about thirty-seven, was referred to the college clinic "to have a growth on the lower jaw cut off." There was no "growth" to "cut off." There was a definite enlargement of the bone in the lower first molar region, giving the man the appearance of carrying a large lump of tobacco in the vestibule of the mouth. The patient suffered local pain, and the

Fig. 255.

Fig. 255. A very large cyst of the lower jaw. The light area represents the cyst. This radiograph shows the hyoid bone. (Radiograph by Lange, of Cincinnati.)

involved area was tender to palpation. The first molar tooth was missing from the jaw. A radiograph was made and showed a cyst involving the second bicuspid and second molar. (I regret that the radiograph has been lost.) Neither the second bicuspid nor the second molar had cavities nor fillings in them. Considering the evidence of neglect of the mouth and teeth, it was not deemed worth while to try to conserve the teeth. Accordingly the second bicuspid was extracted, which permitted the escape of considerable watery, brown pus. A doubt then arose as to whether the radiograph showed an involvement of the molar or not. Another radiograph (Fig. 253) was made. It shows that the molar is involved. It was extracted and more serous pus evacuated. Antiseptic solutions could now be washed from one tooth socket, through the cyst, and out at the other tooth socket. The cyst was curetted, cauterized and packed with sterile gauze. Healing except from within outward was prevented by the

use of gauze, and the case recovered. Relief from pain and soreness was immediate. It required two or three months for all of the enlargement of the jaw to disappear.

In my experience as a radiographer I have observed that the general practitioner of dentistry shows great reluctance to extract a tooth, no matter what the condition he is treating may be. On the other hand, the specialist in oral surgery extracts teeth sometimes without making the

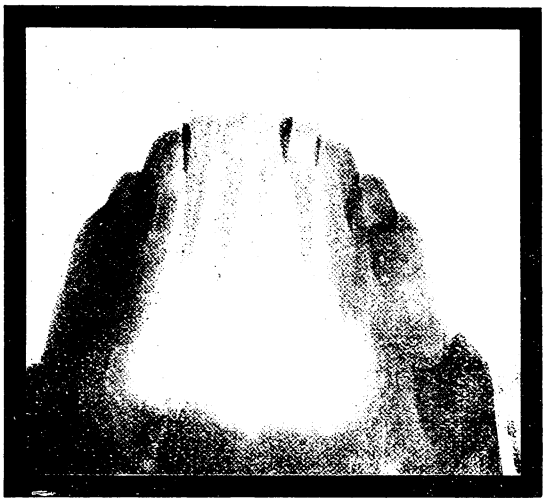


Fig. 256.

Fig. 256. Bone cyst of the lower jaw.

slightest effort to conserve them. I believe, however, that the oral surgeon is less often mistaken. A man may make a greater mistake than the extraction of a tooth. For example: failure to extract a tooth which is causing otherwise incurable suppuration, general sepsis, nervous disorders, necrosis or distracting pain.

Fig. 255.

Dr. Sidney Lange, of Cincinnati, made the radiograph shown in Fig. 255, but did not treat the case. Dr. Lange was, however, able to furnish the following history: Patient, boy, about eighteen. Very large swelling in the lower jaw. No pain or tenderness in the region of enlargement. A radiograph (Fig. 255) was made, and the case diagnosed as a "benign bone cyst." The boy was taken to a hospital and the cyst drained of a straw-colored fluid, curetted and packed with gauze, through an opening made inside of the mouth to the buccal. The patient left the hospital in a week or two after the operation.

Fig. 257.

Fig. 257. Dentigerous cyst of the lower jaw in child nine years old. The arrow points to the tooth in the cyst. The light area represents the cyst. (Radiograph by Pancoast, of Philadelphia.)

Fig. 256. Case: Male, age about twenty-five. Enlargement of the mandible at the symphisis. Tenderness, intermittent local pains. The radiograph shows a large cyst. Failing to keep an appointment, the patient has not been heard of since the radiograph was made.

43. In Cases of Dentigerous Cyst.

Any cyst containing a tooth body, or tooth bodies, is said to be a dentigerous cyst. Dentigerous cyst of the jaws are not uncommon. Their definite diagnosis is possible only when the radiograph is used.

Because the apex of the tooth extends into the pus sac a chronic dento-alveolar abscess is sometimes called a dentigerous cyst. But this use of the term is considered improper.

Fig. 258.

Fig. 258. A dentigerous cyst containing a lower second bicuspid. (Radiograph by Pancoast, of Philadelphia.

Case in the practice of Dr. M. H. Cryer. I quote Dr. Cryer: "The patient, a child of nine, had a swelling of the left side of jaw for about two years. This gradually increased to the size of a hen's egg, causing considerable deformity. A radiograph of the case (Fig. 257) shows a retained deciduous second molar tooth at the lower border of the jaw and surrounded by an ovoid clear area. A diagnosis of dentigerous cyst was made.

Fig. 257.

"At operation through the mouth the shell of bone was found to contain, not the usual fluid, but a resilient mass of pinkish-white tissue surrounded by a sac of darker color. The contents, including the soft tissues, the tooth shown in the picture and the sac, were removed and the cavity lightly packed with gauze. The patient is making an uneventful recovery. The further diagnosis of the case will depend on microscopic examination of the tissue."

Fig. 259.

Fig. 259. Same as Fig. 258 after removal of the fluid contents and upper wall of the cyst, showing the second bicuspid erupting into place. (Radiograph by Pancoast, of Philadelphia.)

Figs. 258 and 259. Figure 258 was made for a patient of Dr. J. G. Lane, of Philadelphia. Age of patient, eight. The radiograph shows an unerupted second bicuspid surrounded by a light area representing a dentigerous cyst. The upper wall of the cyst and its fluid contents were removed, leaving the tooth in place. A later radiograph (Fig. 259) shows that the tooth is gradually erupting into position. (This history is quoted from a paper by Dr. Cryer.)

44. In Cases of Tumor, Benign or Malignant.

I have already reported a case of cystic tumor, which was referred to the college clinic to have the tumor "cut off." There was nothing to "cut off," and a radiograph showed a cavity in the bone, asperation of which accomplished a cure.

Fig. 260.

Fig. 260. Myelosarcoma of the lower jaw. In appearance it resembles a bone cyst somewhat. (Radiograph by Pancoast, of Philadelphia.)

Fig. 260.

The following cases occurred in the practice of Dr. Cryer: "The two patients were sent by different practitioners from different portions of the State of Pennsylvania, but came for examination on the same day. They were two women patients of about the same age, both wearing full upper artificial dentures and partial lower ones, and both suffering from a similar character of pain, the only difference being that in one patient the pain was located on the left side of the lower jaw, while the other was on the right side of the lower jaw. Physical examination revealed the fact that

the right cervical lymphatic glands in one of the patients were slightly enlarged. The history obtained of the cases did not aid in diagnosis. Both patients claimed that the molar teeth on each side had been extracted years ago. X-rays were made of the jaws with the following results:

"Figure 260 was made from the patient whose cervical glands were enlarged. The picture shows a breaking down of the bone, with the two dark shadows indicating abnormal density of the bone in some portions.

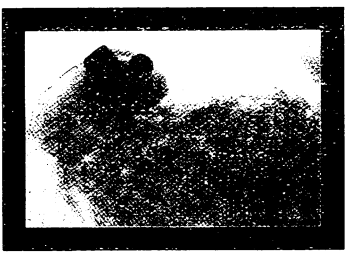


Fig. 261.

Fig. 262.

Fig. 261. Osteoma (?) of the lower jaw.

Fig. 262. Hypertrophy of the gums and alveolar process. The radiograph shows no irritant cause for the condition, and none was found otherwise.

From this appearance, together with the slight enlargement of the glands, the case was diagnosed as myelosarcoma. A microscopic examination of the tissue removed, confirmed the diagnosis."

I do not reproduce the radiograph of the other case because the print I have is not clear enough to permit of a good halftone reproduction. The print before me shows fairly well three impacted lower teeth, one a rudimentary bicuspid, the others a second and third molar.

Dr. Cryer says: "There seemed to be very little difference in these two cases from the history and physical examination, but the wonderful work of the X-rays revealed a very great dissimilarity. On the one hand the skiagraph indicated the sad necessity of removing the entire right side of the jaw and submaxillary lymphatic glands, with the possibility of the disease returning, while in the other case the extraction of the three impacted teeth was the only thing required."

Fig. 261.

My readers are by this time acquainted with the appearance of normal alveolar process and jaw bone. Figure 261 shows what I believe to be an osteoma. The patient would not consent to the removal of tissue for microscopical

examination. The radiograph shows only that the bone is diseased. The exact nature of the disease must be determined by the microscope.

Fig. 262. Case: Enlargement of the gums about the upper anterior teeth, causing considerable disfigurement. Figure 262 shows what was thought to be hypertrophy of the gum tissue and alveolar tissue. Microscopic examination verified the diagnosis. The teeth and the hypertrophied tissue were removed.

Fig. 263.

Fig. 263. The upper arrow points to the permanent lateral incisor. The lower arrow points to an odontoma. (Radiograph by Flint, of Pittsburgh.)

Fig. 263. At the age of thirteen a permanent lateral had failed to erupt. A radiograph was made to learn whether or not it was present in the jaw. Figure 263 shows the permanent lateral, and shows also why it has not erupted. In the path of eruption is seen what I believe to be an "epithelial, composite"* odontoma.

Odontomata sometimes assume considerable size. To be absolutely sure in diagnosis, and to be certain of their complete removal, the radiograph should be used.

Fig. 264. "The case illustrated in Figure 264 presents many interesting features from the standpoint of diagnosis and treatment. The patient was a woman about thirty-five years of age, who suffered for a number of years from pains in the ear and the tonsilar region, as well as from difficulty in mastication and deglutition, while her general health had deteriorated to such an extent that she became very anemic, having suffered from malnutrition due, no doubt, to imperfect mastication and the absorption of pus prod-

*Barrett "Oral Pathology and Practice."

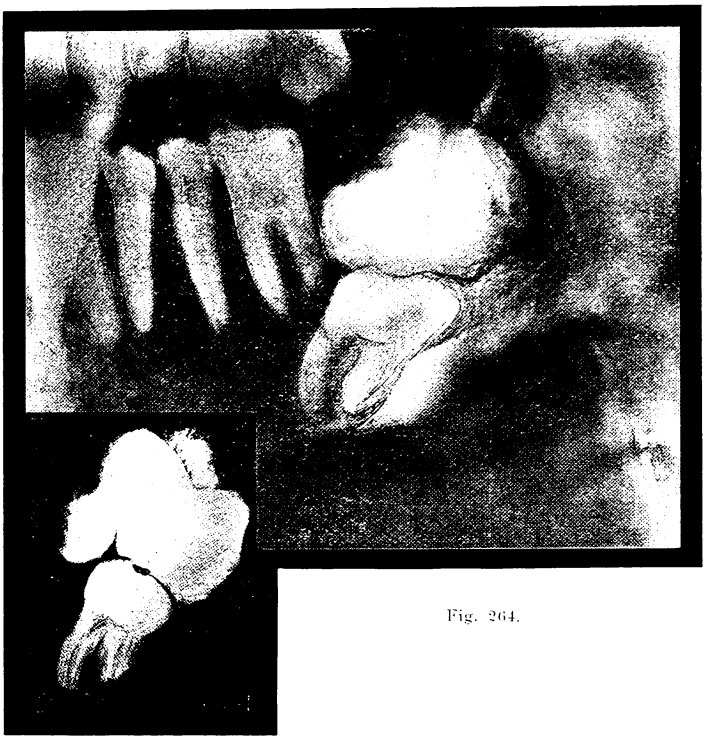


Fig. 264.

Fig. 264. A large composite odontoma. (Radiograph by Chene, of Detroit.)

ucts. In this condition she was referred to the extracting specialist who was unable, from the ankylosis present, to arrive at any definite conclusion as to the possibility of an impacted tooth which was suspected, while the only evidence that pointed in this direction was a free discharge of pus through a fistulous opening in the soft tissues over the third molar region of the right inferior maxillary.

"She was therefore referred to the radiographer when the true condition, as shown in Figure 264, was revealed. The necessity for removing the displaced second molar, as well as the odontoma, presented a situation which was not a pleasing one to contemplate. The patient, as well as her friends, were informed of the probability of fracturing the mandible in the endeavor to remove the molar and the dental tumor, which together occupied almost the entire body of the mandible at the angle of the ramus. Under a general anesthetic of nitrous oxide and oxygen, which was followed by ether, the tumor was removed, as was also the impacted molar, without any great difficulty, but when the circumscribed bony structure

about the molar was drilled and chiseled sufficiently to permit of an elevator passing under one corner of it and pressure applied, the expected happened, and a break in the body of the mandible occurred. This accident was of no serious consequence, however, for under an occipitomental bandage, which a few days later was reinforced by wire fixation, the fracture healed and the case proceeded to an uneventful and speedy recovery, with complete restoration of health. The odontoma was of

Fig. 265.

Fig. 265. Shows that the two lower incisors are not fused together.

composite structure, the central part being made up of what may have been the third molar, about which were arranged concentric layers of cementum, and probably some compact bony structures."

For the report of this case I am indebted to Dr. Don M. Graham, of Detroit, Mich.

45. To Observe Anomalous Conditions Such As the Fusion of the Roots of Two Teeth for Example.

Fig. 265.

Case: Child about twelve. The crowns of two of the lower incisors seemed fused together. To accomplish regulation of the teeth it became expedient in the opinion of the operator handling the case to extract one of the incisors. The choice of the tooth to extract fell to one of the two which seemed fused together. The question arose: "Are the roots of the teeth fused also?" A radiograph (Figure 265) shows they are not. It shows further that the crowns are not fused either, though, let me admit, I shared in the mistake of the man who referred the case thinking they were; and failed, as he had, in an attempt to pass a ligature between them. It was not until I had the radiograph before me, showing me that

I was not attempting the impossible, that I succeeded in getting a silk ligature between the teeth. One of the teeth was slightly malformed; they were almost mortised together in consequence, and in contact from the incisal edge to beneath the gum margin.

Second and third molars are sometimes fused together. I recall having extracted the upper second and third molars in an effort to remove the third, the roots of the two teeth having been coalesced. Had I used radiographs, and known the condition which existed, I might have conserved the third molar, and so saved the second molar, which latter was a useful tooth. Or, had it been necessary to remove the teeth, I might have saved my patient considerable pain by a more inclusive use of my local anesthetic.

A Study of Maxillary Movement.

C. A. Hawley, D.D.S., Washington, D. C.

Read before the American Society of Orthodontia, Boston, Sept., 1912.

The movement of the two halves of the superior maxillary bone has been observed and commented on for more than fifty years. Dr. E. H. Angell, of San Francisco, described this phenomenon in the first volume of the *Dental Cosmos,* 1860, and from that time to the present many others, among them Drs. Farrar, Black, Ottolengui, G. V. I. Brown and Francis A. Faught, have noted this movement as indicated by the separation of the central incisor teeth, when force was applied across the vault of the mouth. Dr. Angell ascribed the separation to the opening of the intermaxillary suture. In the case reported by him the patient was a girl fourteen and a half years of age. A jack screw was placed across the mouth attached on the right side to the first and second bicuspids, and on the left side to the second bicuspid only. The patient was directed to turn the nut of the jack screw twice a day. He says (*Dental Cosmos,* Vol. I, 1860, p. 540): "These directions were industriously followed, and at the end of two weeks the jaw was so much widened as to leave a space between the front incisors . . . showing conclusively that the maxillary bones had separated, while the left lateral incisor had been brought completely outside of the inferior teeth."

Commenting editorially on this report in same issue of the *Cosmos,* Dr. J. H. McQuillen, of Philadelphia, says: "With no disposition to assert that such a thing is utterly impossible, yet taking into consideration the anatomical relations existing between the right and left superior maxillæ and the other bones of the face with which they articulate, such a result appears exceedingly doubtful. Even admitting the impression of the writer to be correct, it would be a very strong argument against the use of such an apparatus, for surely the irregularity of the teeth is a trifling affair as compared with the separation of the maxillæ, which could not take place without inducing serious disturbance in the surrounding hard and soft parts."

I quote the description of this early reported case and the criticism of it, because it seems to represent quite clearly the attitude towards the operation for twenty-five years or more, and, to a considerable extent, even at the present time.

In 1893, in a paper before the Columbian Dental Congress, Dr. C. L. Goddard, of San Francisco, reported a case of a young lady of fifteen in which this phenomenon occurred. The appliance was arranged with bands for the first molars and first bicuspids united on the lingual side with a straight bar. No attachment was made to the anterior teeth, but the jack screw was placed across the mouth against the bars, and the nut turned twice daily for three weeks. At the end of that time the space between the bicuspids was increased one-fourth of an inch; between the cuspids three thirty-seconds and between the centrals one-sixteenth of an inch. It was accounted for by the separation of the two halves of the maxilla in the median line.

Dr. A. E. Mattison, in the discussion of Dr. Goddard's paper, reported a case where, with a jack screw between the cuspids, he had separated the centrals one-twelfth of an inch.

At this time there seems to have been a general recognition of the fact that the intermaxillary suture might be opened, and the general feeling was prevalent that it was not desirable. Dr. Farrar, 1888, devotes a chapter in his book, Vol. I, to its consideration, cautions against it and describes an appliance for its prevention.

Many others have noted this appearance of space between the incisor teeth, and have universally attributed it to the separation of the maxillary bones, and also have generally considered it undesirable, if not alarming. In fact, the attitude of Dr. McQuillen has been the generally accepted attitude, up to about ten years ago.

My own early experience with this phenomenon has been similar to that of many others as confided in private conversations, and recorded in

the literature. About fourteen years ago I placed a jack screw across the palatine vault of a young man of fifteen, whose arch was considerably narrowed. I gave him a wrench and told him to turn the nut as fast and as often as he could without giving himself any pain. He appeared in thirty-six hours with a space of one-eighth of an inch between the central incisors. In alarm I at once removed the jack screw and allowed the teeth to return to their former positions, tied them together and proceeded more slowly.

It is very interesting to note an exception to this general attitude toward opening the suture by that most careful and accurate observer, Dr.

Fig. 1.

G. V. Black. In the general discussion of a paper by Dr. Case on "The Widening of the Arch," he says: "I have one point in the widening of arches that I wish to recommend, because I have had such good results from it in my own practice, though I would not recommend that the effort to obtain it be too strongly made; that is, to put in split plates for young patients when we want to widen the arch, or put in the best anchorage you can get against the teeth; then put in a jack screw between and open the suture of the maxillary bones carrying the incisors directly apart and carrying the two halves of the jaw apart. There is nothing that gives me so much pleasure as to see the suture open readily and widely. It can then be held until it is closed by a new formation of bone. I have done this in a number of instances with the happiest results. There is no movement of the teeth in the sockets. The movement is accomplished quickly and satisfactorily, but you cannot do it in every case, and you should not try to except with young patients."

Before the Section of Orthodontia, Fourth International Dental Congress, 1904, Dr. Ottolengui read a paper entitled, "Spreading the Maxilla vs. Spreading the Arch."* As described in the paper the author had

*Also see Dental Cosmos, 1897, Vol. XXXIX, Pages 138-9.

proceeded with the conviction that no harm could come from opening the suture, and he reports a series of operations extending over a period of ten or fifteen years, with this particular result in view. The appliance used was a thick vulcanite plate, the force being obtained by a square piece of dry pine wood inserted in the center. Accepting the view that the suture could be opened, he ligated the incisors and temporary molars to the two halves of the plate, and successfully produced the phenomenon in every case.

It should be noted here, that in other methods where the anterior teeth were left free the characteristic space between the central incisors

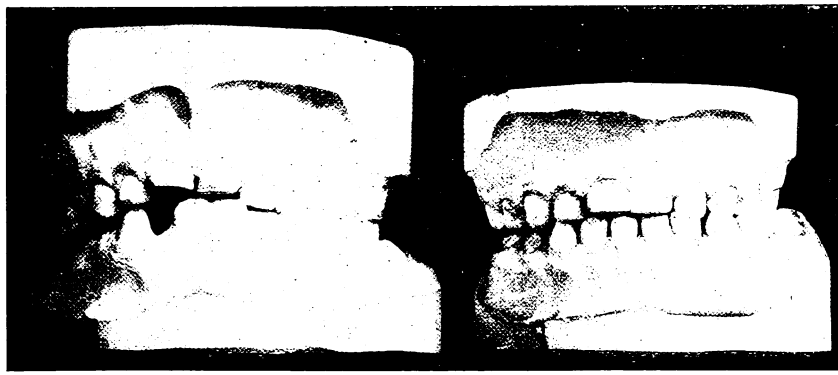


Fig. 2.

did not always appear, but sometimes the space appeared between the lateral and central, and sometimes between the lateral and cuspid.

Dr. G. V. I. Brown (*Journal of American Medical Association,* 1909, and *Dental Cosmos,* 1909) claims originality for this operation for the definite purpose of producing more nasal space. His attachment to the teeth is by cemented bands on molars and first bicuspid, or cuspid with a lingual bar and a jack screw across the mouth. He says (*Cosmos,* 1909, p. 9): "By the aid of pressure, which is so gently applied that there is no pain and but little inconvenience, it is possible in all young persons to force the maxillaries apart, by separating the median suture extending between the central incisor teeth and on through the central portion of the hard palate. . . ." Evidence of this is given by the fact that the central incisors are moved apart without an attachment or a direct pressure of any kind being applied to these teeth. Dr. Brown also offers as proof that the suture is actually opened, the performance of the same operation on fresh cadavers and on skulls.

Dr. Francis A. Faught, in a paper entitled "The Relation of Upper

Respiratory Obstruction to Oral Deformity," before the Section of Stomatology of the American Medical Association, at a meeting at Atlantic City, June, 1907, discusses the value of the operation of opening the suture, and while recognizing that stimulation of normal growth is an important factor in producing the improvement in nasal conditions after

Fig. 3.

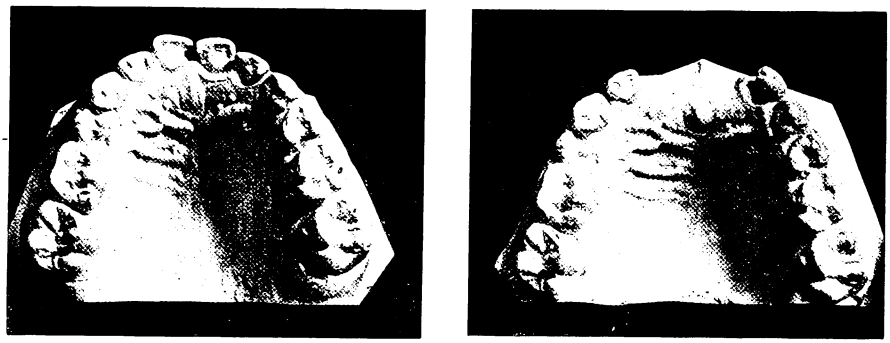


Fig. 4.

widening the dental arch, yet concludes that "Operations designed mechanically to increase the respiratory capacity of the nasal tract are practically valueless unless the intermaxillary suture is separated, as shown by increase of space between the central incisors."

For a number of years this operation has appealed to me as a valuable one that should, in some cases, be adopted as a regular procedure in orthodontia. The direct benefit to the nasal tract is obvious, and it may

be noted that no harm from it has ever been reported. The objections raised from that standpoint have been entirely theoretical. The real objection has been the crude character of the appliances as compared to the appliances generally adopted for the regular work in orthodontia, and the fact that a complete new appliance had to be substituted to complete the case.

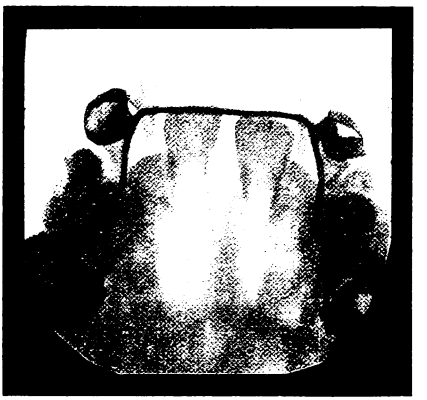
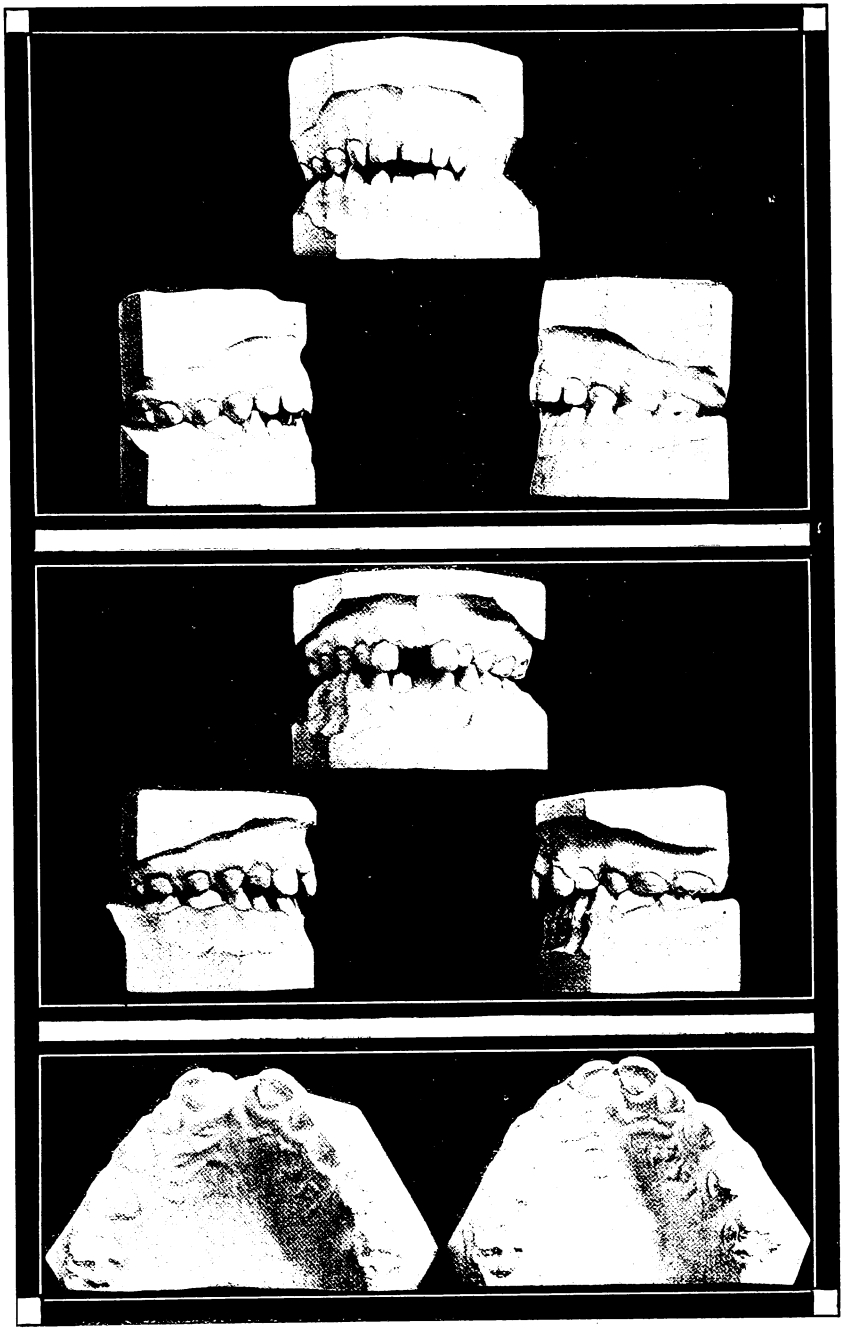


Fig. 5.

The Author's Recent Experiences.

In January, 1909, I made the first experiment upon a patient, a boy, age seven and a half years. The appliance used in this and following cases was substantially the one shown in Fig. 1, a divided arch, 16-gauge, with a device at the ends to prevent tipping the molar teeth. Spurs were soldered on the arch back of the nuts on the divided portion from which to ligate to the central or lateral incisors, so that the force exerted laterally by turning the nuts is exerted upon the center of the dental arch, acting so as to carry the two halves directly apart as in the jack screw across the mouth or the Ottolengui split plate. Heavy irridio-platinum, 19-gauge wires were used along the lingual surfaces of the deciduous molars attached to the cuspids or in some cases to the centrals, and in others to the laterals. To carry out the molar portion, I depended on the spring of the stiff 16-gauge arch, the tension of which, in this arrangement, is increased materially every time the anterior nuts are turned. The advantage of the appliance over those previously used for this purpose lies in the fact that there is nothing across the palatine vault, and that it can be quickly removed and replaced by a regular arch, if desired, to complete any details of placing the individual teeth, after the desired width is obtained, or the case may be com-



Figs. 6, 7 and 8.

pleted without replacement. Fig. 2 shows the models of this first case at the ages of four and seven. At four the upper deciduous molars and cuspids were lingual to the lowers on the left side. At seven the first permanent molars had erupted in the same relative position. However, while the patient seemed to rest the jaws more often in this position, the upper arch seemed to be bilaterally contracted, and the bite was almost as often lingual on the right side as on the left. For this reason the arch was expanded equally on both sides.

Fig. 9.

In the appliance used on this case and the two following to be described, the device for preventing the molars from tipping was the split buccal tubes. In the first one the central incisors were loose and almost ready to be shed, so the laterals and cuspids were banded and a small wire loop soldered to the upper distal edges of the bands to hold the ligatures. The lingual wire was soldered to the molar and cuspid bands. The ligatures used were the No. 3 grass line. As this ligature contracts instead of stretching under tension, it is possible to get the entire force of the screws on the teeth, and I consider it valuable in this place. The adjustment of this appliance was completed January 12th, and it was cemented to place, and the arch inserted with very slight tension. The teeth showed no soreness, and in three days, January 15th, the arch was removed and bent to give it considerable tension. The cuspids and laterals were also ligated to the arch with the grass line at this time, but the nuts were not turned until a couple of days later, from which time they were turned twice a day until they were tight, but not enough to cause pain.

On the 17th the space had widened between the laterals eleven-hundredths of an inch; on the 19th, eighteen-hundredths; on the 20th, twenty-three-hundredths. Observing at this point that the molars were not moving quite so fast as the anterior part of the arch, I did not again turn the nuts until the 24th, to allow the spring of the arch to move the molars and catch up. On the 24th, the nuts were turned again, and on the 28th the space between the laterals had increased to thirty hun-

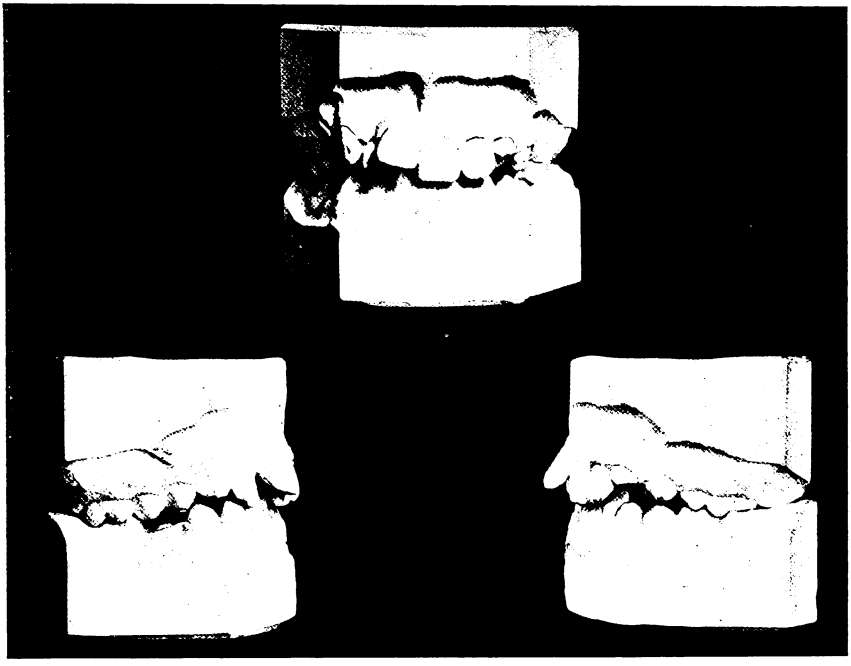


Fig. 10.

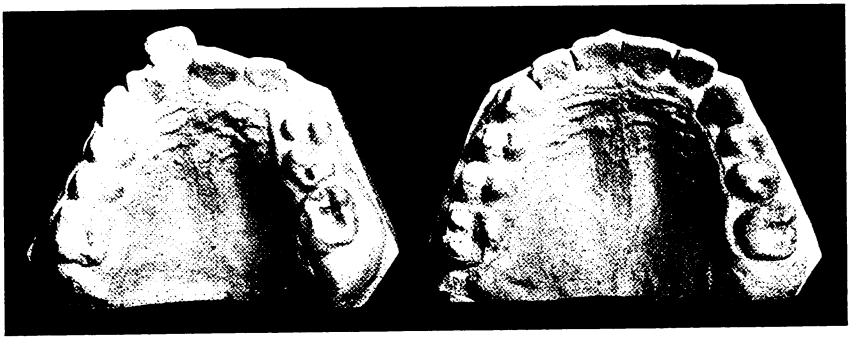


Fig. 11.

dredths, and the molars were nearly over to normal with the lower. The anterior portion was again allowed to rest until February 3d, when the occlusion was normal. On February 6th, the case was retained. The space gained between the incisors was a little more than necessary, so in

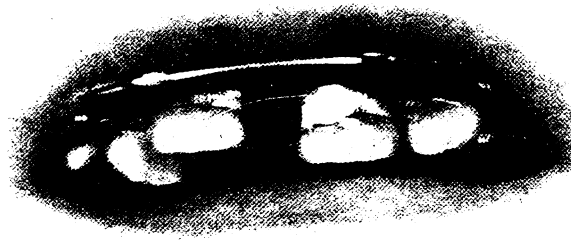


Fig. 12.

Fig. 13.

Fig. 14.

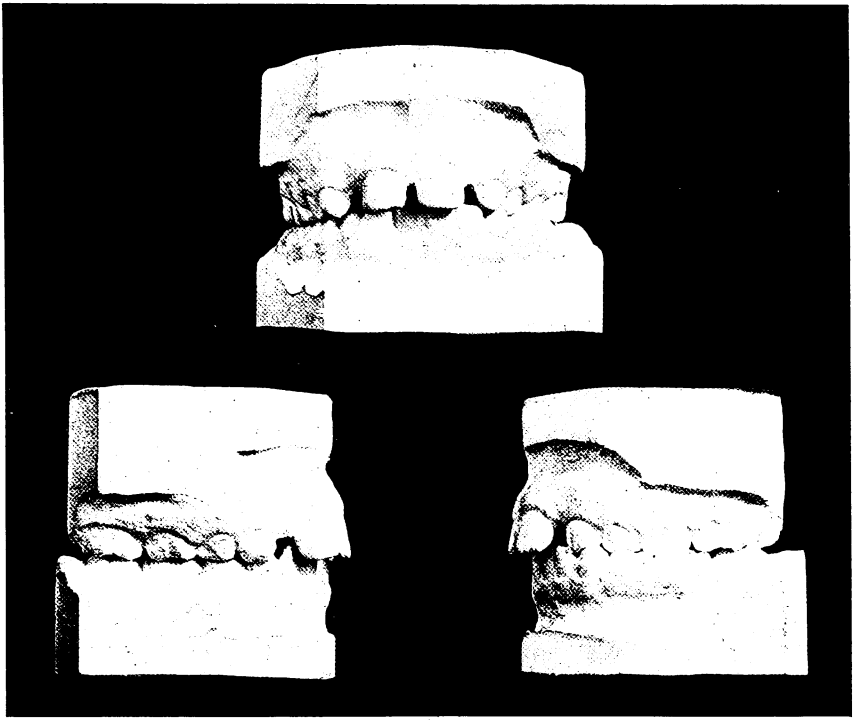


Fig. 15.

retention it was allowed to drift back five-hundredths, making the space gained between the laterals twenty-five-hundredths. The space gained in the cuspid region was seventeen-hundredths, measuring from the outside of the teeth. During the treatment the central incisors, which were very loose at the start, were shed. The appliances were in the mouth twenty-two days, or a day more than three weeks, and the active movement was accomplished in about fifteen days.

This patient was in my own family where I could watch him closely, and at no time was there any soreness or pain, or any serious interference with the usual use of the teeth in mastication. In fact, as soon as the buccal cusps of the molars rose over the cusps of the lower teeth, the patient noticed that he could use the teeth better and bite harder than ever before. The occlusion of the teeth at the end of the operation is shown in Fig. 3, and the palatal appearance in Fig. 4.

This case presented all the phenomena that have been described as opening the suture, and it was my own belief at the time that that was what was taking place. The patient was shown to a number of dentists

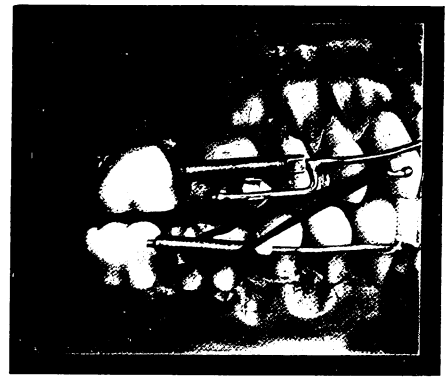


Fig. 16.

Fig. 17.

at my office during treatment, and presented at a meeting of the District of Columbia Dental Society, and the opinion was generally expressed that the maxillary suture had been opened. The typical depression described in such cases could be felt at the center between the incisors, and all the evidence of this movement, as described by different writers, seemed to be present. At the conclusion of the treatment, after the appliances were

removed and the retention adjusted, a radiograph was made of the palatine vault to show the condition of the suture. This radiograph is shown in Fig. 5. A slight separation of the suture is seen, but not enough to account in any way for the movement, and not more than is often seen in normal cases.

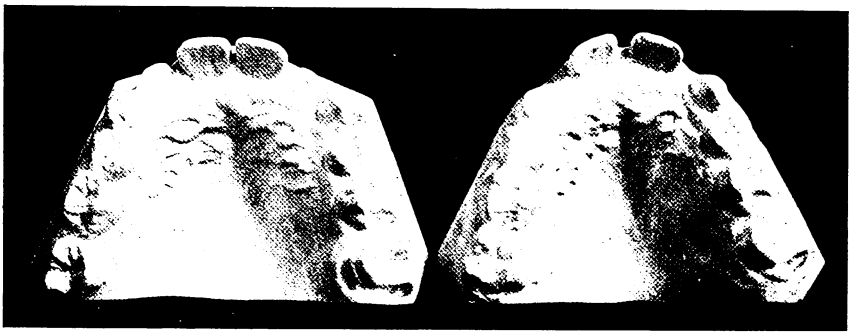
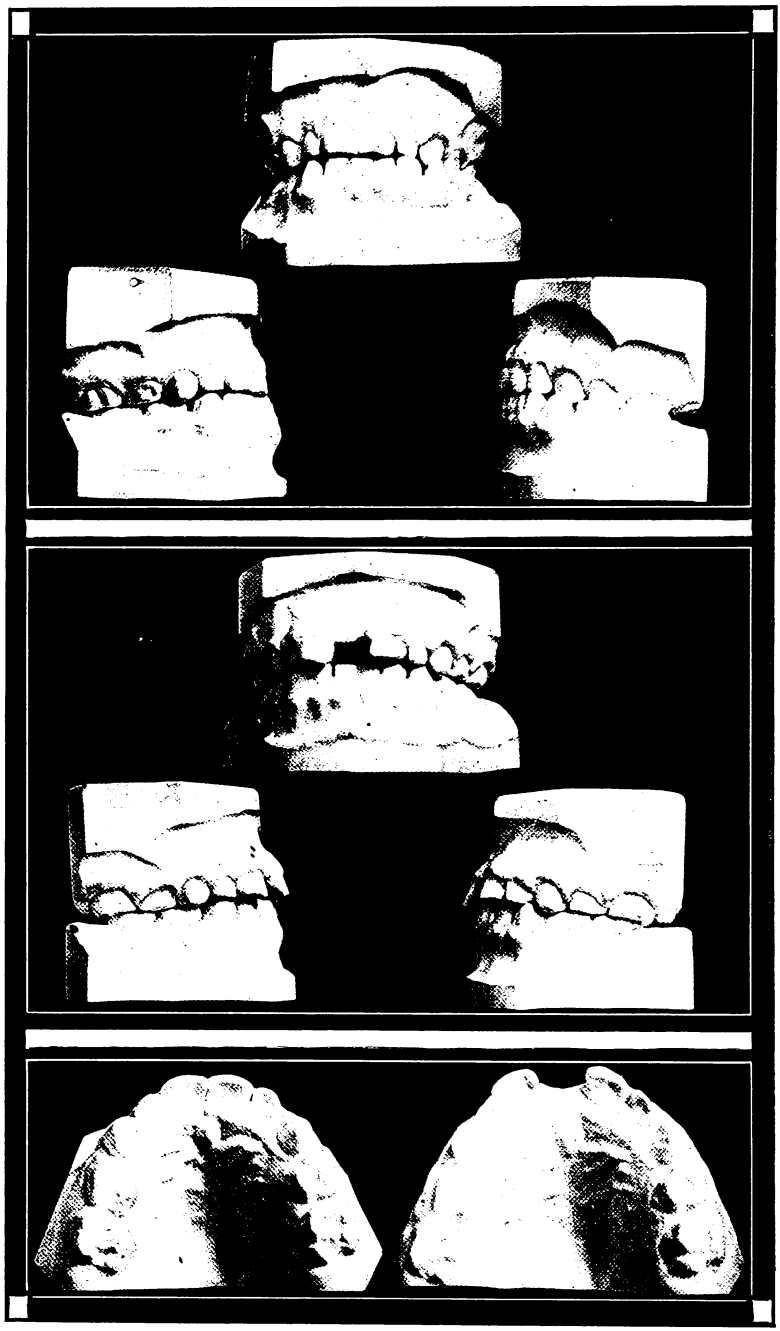


Fig. 18.

Fig. 19.

Case II. In the same month, soon after the first case was finished, a boy four years old was sent to me by a rhinologist of Washington, who stated that he had removed adenoids, but there was present a deflected septum. The condition of the teeth is shown in Fig. 6, a narrowed upper arch and lingual occlusion on the left side. The treatment was very similar to the preceding case, except that the central incisors and second temporary molars only were banded, and the lingual wires soldered to both, thus precluding



Figs. 20, 21 and 22.

Fig. 23.

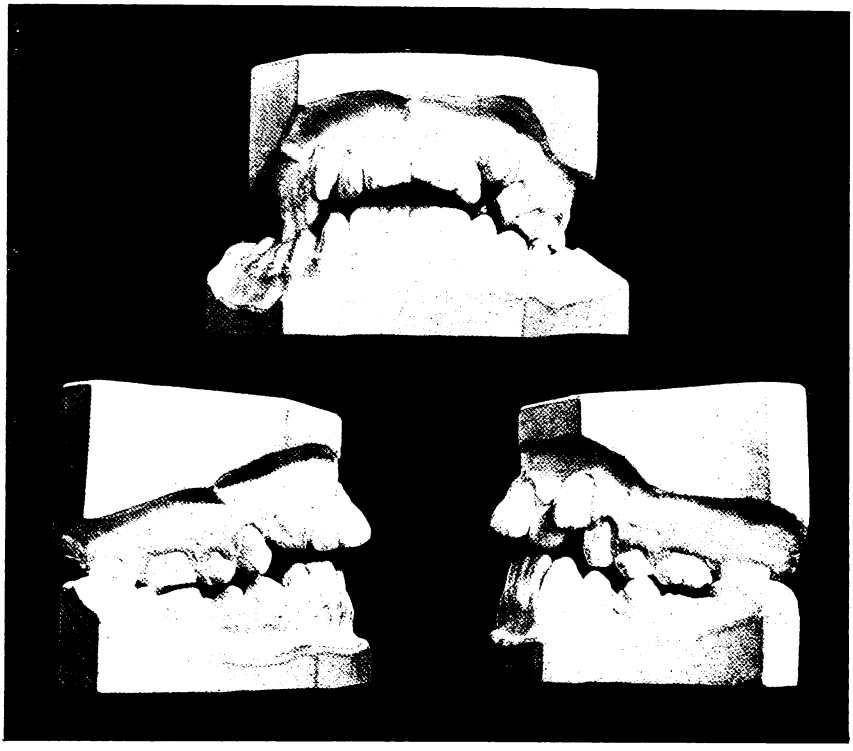


Fig. 24.

any individual movement of the teeth. The operation was finished in eighteen days, with the result shown in Figs. 7 and 8. Soon after retention the case was referred back to the rhinologist, and he reported that the deflection in the septum had disappeared. Radiographs of the palate are shown in Fig. 9, before and after treatment. The one taken before is not very clear, as it was nearly impossible to keep the child's head still. However, it shows the position of the permanent incisors clearly enough to compare their places before and after the operation.

Fig. 25.

This case proceeded a little faster than the first, though the nuts were only turned once a day. Very little soreness or pain developed. So far as I could observe, it was much less painful than in the case of teeth moved by the ordinary method. The retention was kept in place three months, and after a year the teeth remained in the same positions.

From the time of these first two operations to the present, I have used this method in fifteen cases. The limits of this paper will not permit of describing all of them, but I will present a number that show most marked maxillary movement, and which offer the clearest evidence bearing on the question of what takes place in the vault of the mouth during this kind of treatment.

Case III. Fig. 10 shows the models before treatment of a boy eleven years old. Fig. 11, the palatal view of the upper arch, before and during the treatment. I thought that if I could open this arch through the center, and then draw the left lateral into the space, it would simplify the treatment very much. A space of thirty-four-hundredths of an inch was opened in forty-two days, or six weeks' time. The space gained between the molars was also thirty-four-hundredths, showing uniform widening along the whole arch. Fig. 12 shows the appearance of the anterior teeth while the work was in progress. After the space was obtained the left central was moved

Fig. 26.

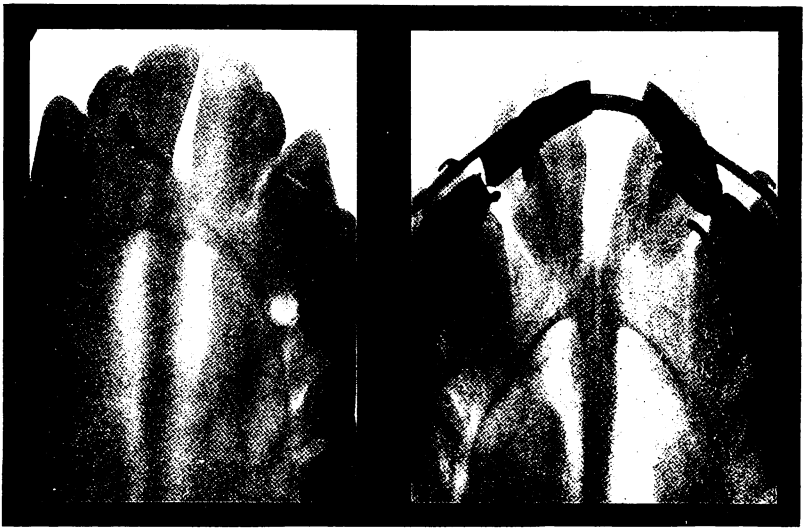


Fig. 27.

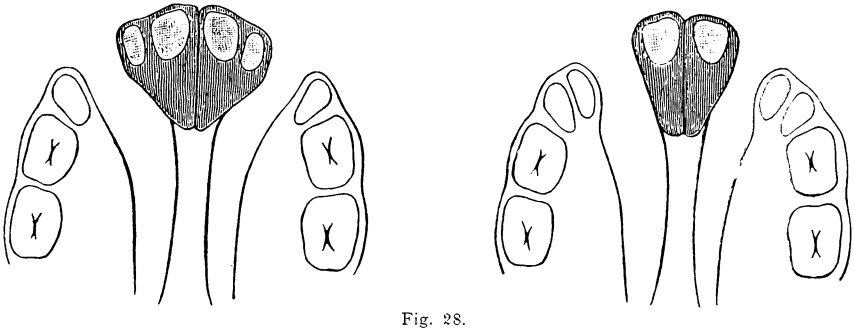


Fig. 28.

over into the space, then a plain arch substituted, and the laterals turned into position. Fig. 13 shows the radiograph of the palate after treatment.

Case IV. Fig. 14 shows radiographs both before and after treatment. Patient, girl eight years of age. In this case the time of treatment was about four months. The arch was widened about twenty-five-hundredths of an inch. There seems to be a redistribution of bone on both sides of the suture.

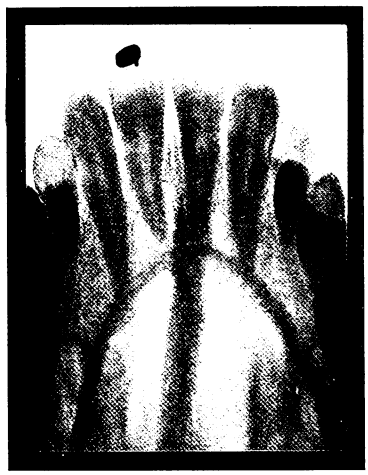


Fig. 29.

Fig. 30.

Case V. Fig. 15 shows models of a boy of nine before treatment. In this case a slightly different course was pursued. The central incisors were drawn together and retained in the first few weeks. The lingual wire was fastened to the deciduous cuspid. The device to prevent the molars from tipping was changed first to the Ainsworth perpendicular tube, then later in the treatment to the device shown previously in the illustration of the apparatus. This device is better illustrated in Fig. 16, and I may say that I like it better than any other I have tried. The final occlusion of this case is shown in Fig. 17. Width gained across the molars was twelve-hundredths. Time of treatment about four months. Fig. 18 shows occlusal views of models before and after treatment, and Fig. 19 the radiographs.

Case VI. Fig. 20 shows models of a boy four and one-half years old, with lingual occlusion on the left side. Bands were placed on the centrals and the space produced in the center. No attempt was made to hurry the movement. During the first three weeks the nuts were turned only twice a week, and the appliance was in the mouth about two months. The movement was very easy, and the father wrote me at the conclusion that the boy was sincerely sorry that he could not go on with his visits to the office. Fig. 21 shows

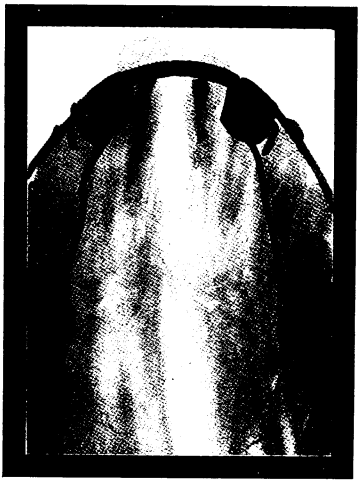
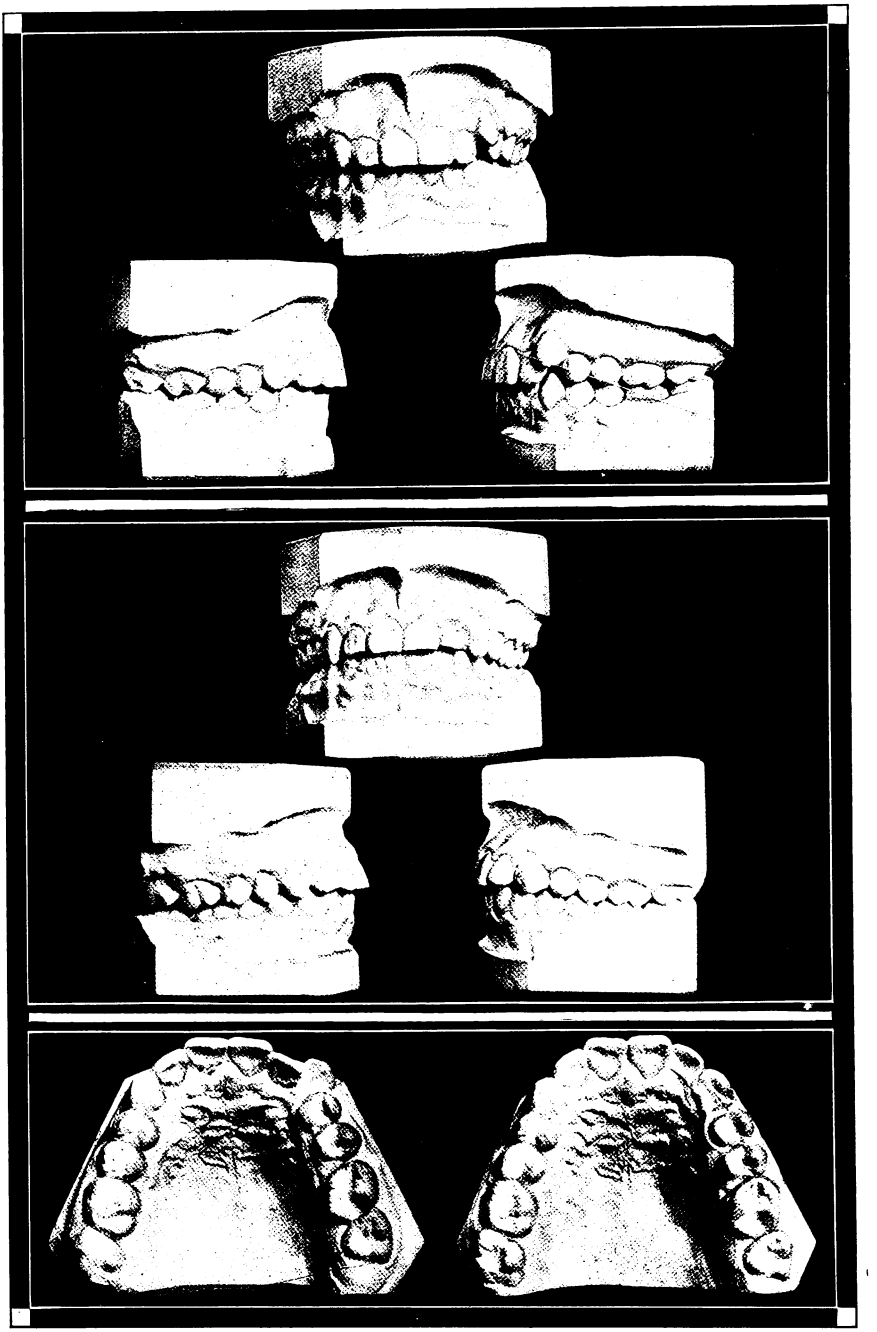


Fig. 31.

the models of the completed case, and Fig. 22 the palatine views before and after treatment. Fig. 23, radiographs before and after treatment.

Case VII. The next case is a young man sixteen years of age. Fig. 24 shows models before treatment. In this case lingual wires were used, extending past the first bicuspids, and ligated in front of them through to the arch. The centrals were banded and ligated from the usual points of the arch, their upper distal surface. Rapid movement was not especially attempted, and space between centrals was produced in four weeks. Fig. 25 shows the appearance of the upper model after treatment, and Fig. 26 appearance of the palatine surfaces of the models before and after treatment. Fig. 27 shows radiographs of palate both before and after treatment. In this case the molars showed more than usual resistance to moving. After a week or two a jack screw was therefore placed across the vault of the mouth resting on the lingual wires in the embrasures between the first



Figs. 32, 33 and 34.

molar and second bicuspid. This jack screw was kept in place about one week. The amount of movement across the cuspids was twenty-two-hundredths of an inch, and the space between the incisors twenty-five-hundredths. No attachment whatever was made to the cuspids. The appearance of the movement was such that if separation of the suture ever occurs I would expect it in this case, yet the radiograph does not seem to disclose it.

In studying the action of the appliance and the radiographs in this

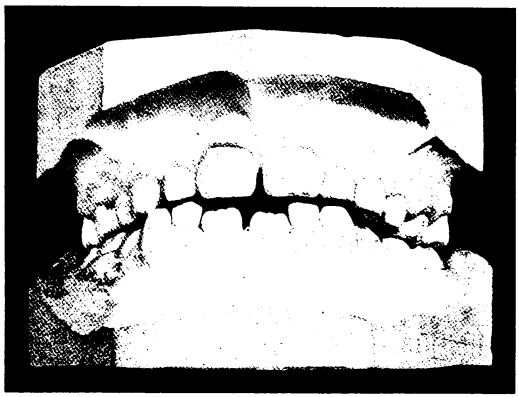


Fig. 35.

series of cases, I can see no evidence that the suture has in any case been opened. It, therefore, is evident that the appearance of a space between the central incisors, either when force is applied to them, or when they are left free, is not necessarily evidence that the maxillary suture has been opened. As against the negative evidence in the radiographs, we have only the testimony offered by Dr. Ottolengui that in one of his cases a needle could be easily passed through the center of the mouth into the nasal space, and the experiments of Dr. Brown on skulls. In order that the operations on dry or macerated skulls should be conclusive evidence, it must be assumed that the tissues holding the two halves of the maxilla together are as resistant to separation in the dry or macerated skull as in the living human being. This is problematical.

Author's Views.

What seems to take place is the stretching of the thin plates of the palate between the reinforced portion along the suture and the thick alveolar structure surrounding the teeth. Practically all the radiographs of the palate show this portion to be thin, and the radiographs after treatment give evidence of the stretching and rearrangement of the bone in that region.

That this line is the line of least resistance is indicated by the fact that cleft palate appears along this portion of the palate. In Fig. 28 we have the illustrations of Kölliker and Albrecht (Gray's Anatomy) showing the lines of separation of cleft palate.

In Figs. 29, 30 and 31 we have radiographs of the palate showing that along these lines the bone is thinnest. The lack of soreness or tipping of the teeth is further evidence of movement of the halves of the maxilla. The value of this movement is not greatly affected by the consideration

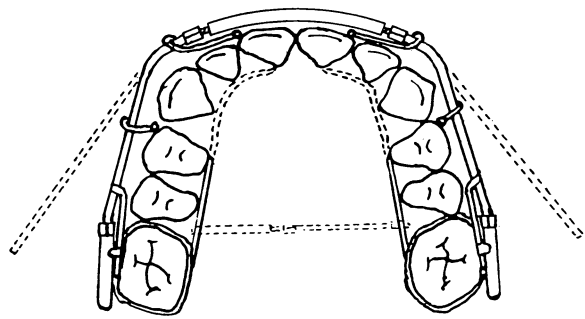


Fig. 36.

of whether the suture is opened or the movement occurs by stretching on either side except in the bearing it has on the adjustment and management of the appliances.

When force of the character previously described is exerted, the movement will take place in the line of least resistance, and the anatomical structure indicates the portion on either side of the suture as that line. It has been pointed out that this space does not always occur between the centrals, but sometimes appears between the laterals and centrals or laterals and cuspids. This has been observed by Dr. Brown and others. Supposing the force to be equally exerted from either side as in the jack screw across the mouth, acting on the bridge of bony tissues holding the incisor teeth, these dividing forces would naturally meet in the center and thus space would most often occur between the centrals. In experimenting I have found that this space can be produced at any point desired, yet most easily between the centrals.

Case VIII.

There is another kind of movement that I have observed in a number of cases that I have not been able to explain except on the supposition that the whole half of the maxilla can be moved. Of these cases I will show one as an example. The models before treatment are shown in Fig. 32. The bicuspids and molars on the left side have apparently moved forward, and

I wished to move them back. I put on the regular expansion arches with bands on the first molars, and provided for intermaxillary rubbers on the left side. I expected to wedge back the second molar a short distance, and then move the first back to take up the space, continuing this process until I produced a sufficient space between the molars and second bicuspid, next to move that back and then the first. I worked for a couple of months without being able to produce any space between the second bicuspid and molar, and the case began to give me great anxiety when one

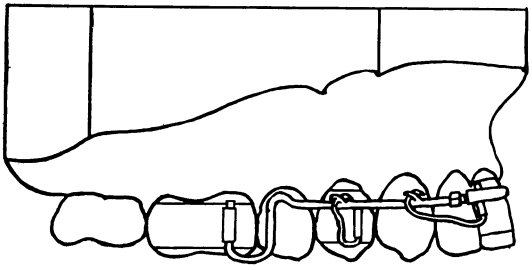


Fig. 37.

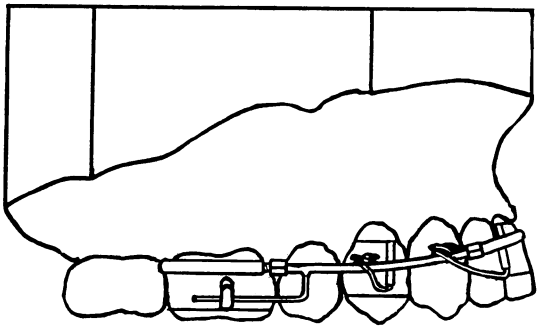


Fig. 38.

morning I discovered that considerable space was appearing between lateral and cuspid. I had banded the cuspid with a hook at the gingival line, and had ligated it down to the arch, so that the downward pull of the intermaxillaries was taken up by the cuspid, thus tending to wedge it against the first bicuspid.

I at once abandoned the effort to produce space between any other teeth, and the molars and bicuspids seemed to move back bodily and the cuspid came down into place. The completed models are shown in Fig. 33 and the occlusal view in Fig. 34.

Appliance Used.

In regard to the appliance I have used for this purpose, while not perfect it has some advantages over any others I have seen recommended. It obviates the necessity of using anything across the mouth, the advantage of which is very great.

In some cases, however, the anterior separation is faster and easier than the posterior, and I have found it of advantage in such cases to utilize a jack screw across the mouth for a few days. The construction of the appliance is such that this is easily done, and it can be removed and inserted as required. The device for preventing the tipping of the molars should be as positive as possible, and the anchorage in the region of the cuspid should be of this character. While there is no question that maxillary movement can be accomplished without these devices for preventing the tipping of the teeth, yet I am convinced that they make the movement much more certain and accurate.

Effect on Nasal Space.

As to the comparative value of maxillary movement in its relation to the opening of the nasal passages, while it is no doubt true that much more time and wider observation are needed to correctly estimate its effect, yet it seems reasonable, as claimed by Dr. Faught, that this movement acts much more accurately and definitely to increase the nasal space. In the majority of the cases where I have used this method, I have noticed a quicker and more definite improvement in breathing than where I have tipped the teeth outward, as in the usual movement with the simple expansion arch. The disappearance of the deflection of the septum in the second case reported is very significant evidence of immediate opening of the nasal space.

The question will naturally arise as to whether there is any danger to the permanent incisor teeth in opening this space, and whether they will afterward erupt to their normal positions. The only evidence I have on this point is this model Fig. 35 of the first case reported. These models were made one year after the retention was removed.

I think it has become evident to all who have watched the movement and retention of teeth over a period of years, that the movement of teeth by tipping the crowns is not the most desirable method of movement. This method has been used with the supposition that the natural forces of mastication or the growth of the bones through stimulation during movement, or both, will, in a few years, straighten up the teeth, the crowns remaining in their new positions, and it is only upon such supposition that this kind of movement can be tolerated. Yet, while we must all admit that this desired result does obtain in some fortunate cases, it is not at all reliable and no retention, especially of the molars and bicus-

pids, can be trusted until the teeth have assumed, or have been placed, in their upright positions with their buccal cusps interlocked. Where maxillary movement is successfully accomplished there is no tipping of the teeth, and the effect will undoubtedly be to greatly shorten and simplify the retention.

One of the most beneficial effects of the widening of the dental arch in orthodontic treatment has been found to be the improvement in the condition of the nasal passages. The importance of this improvement of the breathing capacity should lead us to widen the dental arch as far as possible within certain well-defined limits. In movement with the ordinary expansion arch with the regular smooth round tubes, one limit to the amount of the expansion is found in the extent to which it is wise to tip the molar teeth outward without danger of their remaining in this position. The movement of the maxillary bones would remove this restriction. The restriction set by nature on expanding the arch is made by the size and character of the teeth. In no case should they be carried beyond the point where they will form the normal arch, and rest with perfect contact points.

The question will naturally arise as to whether this movement "can be carried to an extent that will cover all requirements in the necessary widening of arches?" I have easily obtained thirty-four-hundredths of an inch both in the molar and incisal region, and I feel sure that this will cover the requirements of the great majority of the cases presented for treatment.

In the treatment of children this method of operation presents great advantages. While the appearance of some forms of malocclusion in children under eight years of age makes the wearing of appliances for a long period of time justifiable, yet it is not desirable. Any method that will accomplish results in a shorter time without the risk of breaking up the habits of mastication will be very beneficial. The forms of malocclusion that we treat most at that period are mesial or distal occlusion and general lack of development, sometimes shown, as in some of the cases I have presented by lingual occlusion of the upper molars.

In mesial or distal occlusion there is present lack of harmony in the sizes of the lower and upper arches. If this is corrected the mesial or distal occlusion at this age will generally disappear or be remedied very easily. In almost every case we must harmonize the arches by expanding the upper arch, not by contracting the lower. If we can widen this arch in two or three weeks by maxillary movement I think we will have done a much better operation than can possibly be done by any other method, provided there are no bad results in the movement; and none so far have appeared.

In cases of general lack of development with lingual occlusion of the molars, normal conditions were established in much less time and with far less discomfort than by any other method I have ever used. So far as I have observed, very little or no lateral growth is showing in the children that come under our treatment at the present time. The growth spaces that are supposed to appear do not come. Growth spaces, when they do come, only appear between the anterior teeth, and are probably caused by the spreading of the two halves of the premaxilla in the normal stimulation of severe mastication. If these spaces are not apparent at the age of five, we may be sure that there will be malocclusion. If we can spread the maxillæ in a few weeks, artificially producing this growth, is that not the best treatment of the case that can be followed?

Appendix. The following three illustrations are added to the paper to make more clear the application of the divided expansion arch to produce maxillary movement. Fig. 36 shows the position of the lingual wires which, as shown by the dotted lines, may be extended to the cuspids, laterals or centrals, as desired. The possibility of placing a jack-screw across the arch for a few days, or a week, to hasten the movement, is indicated similarly.

The arch should be not less than 16 gauge, and should fit the front tube very tightly. An oval or flat tube is best to prevent turning. These cuts show small vertical tubes on the centrals and laterals and first bicuspids, with 20-gauge gold wire bent over the arch instead of ligatures.

Figs. 37 and 38 show different devices on the molars to prevent tipping. With this adjustment of the divided arch the work can be carried on slowly or very rapidly with a minimum amount of inconvenience to the patient.

Old and New Classifications of Malocclusion of the Teeth.

By GUILHERMENA P. MENDELL, D.D.S., Minneapolis, Minn.

Oliver Wendell Holmes said, "Nothing clears up a subject like letting a stream of talk flow through it," but after reading Dr. Federspiel's paper, and the discussion of it, in the April ITEMS OF INTEREST, I thought, "Nothing *muddles up* a subject like letting a stream of talk flow through it."

Classification of malocclusion of the teeth is a very important matter. Dr. Angle's simple classification has enabled dentists to easily and accurately diagnose cases, and nothing has contributed more to the spread of orthodontia; and so I cannot but regard it as unfortunate that a system of classification has been published which, if taken seriously, will only plunge us back into the confusion in which we struggled before we adopted Dr. Angle's classification.

When Molyneux, fancying that the observations of the nutation of the earth's axis destroyed Newton's theory of gravitation, tried to break it softly to Sir Isaac, he is said to have answered, very calmly: "There's no arguing against facts and experiments." Now facts and experiments have proved over and over again the direct and inseparable relation between normal occlusion of the teeth and facial harmony and balance, and between malocclusion of the teeth and facial inharmony and unbalance, and any scientific person, any reasonable person, must accept as established principle what facts and experiments demonstrate.

The fundamental relation between malocclusion of the teeth and deformity of the jaws and dental arches being an established fact, a necessary deduction from this fact is that "Occlusion is the basis of the science of orthodontia." And if occlusion is the basis of the science of orthodontia, any accurate and useful classification of malocclusion must be made on the basis of the occlusal relations of the teeth. Dr. Fischer's classification "(1) Malformation of the Jaws and Their Processes, (2) Malrelation of the Dental Arches, (3) Malposition of the Teeth," is an artificial division of really inseparable conditions, and diagnosis and treatment based upon this classification are bound to be wrong. "Deformities resulting from abnormal extraneous forces, such as the contraction of scars; spasms of paralysis of the muscles other than those of mastication," are anomalies and comparatively rare, and they do not invalidate in the least the general proposition that deformities of the jaws and dental arches are in direct proportion to the degree of malocclusion of the teeth.

I have never heard any person of authority claim that placing the teeth in normal occlusion would fully develop an under-developed jaw,

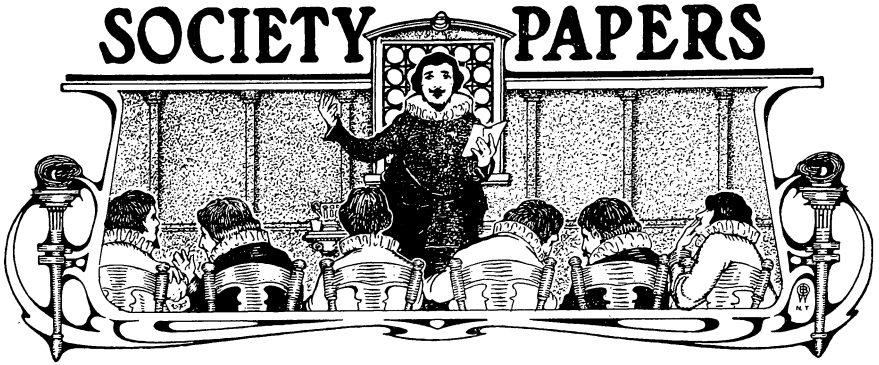
or entirely reduce an over-developed jaw in every patient at any age, or even in every patient of a comparatively immature age, or, in fact, in every patient of whatever age. Normal occlusion is merely the means through which the mechanical stimulus, which is a main factor in bone growth, is properly transmitted to the bone-growing cells of the jaws. Other elements enter into the process of bone growth, and any person experienced in medical matters can think of adequate reasons why development of the jaws might still be subnormal or supernormal after the mechanical stimulus to bone growth had become normally active.

Dr. Federspiel surely does not expect us to believe that in those cases in which the mandible does not fully develop after the restoration of normal occlusion, because the growth forces fail to respond fully to the normally directed mechanical stimulus of the inclined occlusal plains, the growth forces in the region of the glenoid fossa will respond to the demand made upon them to reconstruct the glenoid fossa or the condyle, or both. He certainly ought not to ask us to believe in the possibility of such a bony reconstruction without showing us at least one case in which such a reconstruction had taken place. And unless such reconstruction does take place the jaw will have to be mechanically or voluntarily held forward during the patient's whole lifetime, and I believe that only about one patient in five million would have sufficient determination to persist in it. Let us not be superstitious. The pressure of a column of water in a glass tube no bigger than my finger will balance the pressure of the ocean, and the growth forces which will fail to respond to normal mechanical stimulus in the region of the chin will fail to respond to stimulus in the region of the ear.

No name, however good Greek or Latin it may be, will tell the whole story involved in classification. Any term, sufficiently short for practical purposes, will need much amplification to be really intelligible to the uninitiated, and Humpty Dumpty's reply to Alice, "Words mean what I make them mean," really contains the sense of our language. Words are merely handles by which the mind takes hold of ideas, and every new use of an old word or new combination of old prefixes and suffixes is injected with a new meaning, which must be patiently learned to really appreciate to the full the ideas that they are intended to convey. Ideas are what we want, and we need to be careful that we are not blinded by the technical dust of too much Latinity. Any classification taken by itself is mere bare bones. The author's whole treatise must be studied to get a technically correct idea of his subject. But it is not necessary for their general diagnostic purposes that dentists and rhinologists should have a detailed knowledge of orthodontia. A good knowledge of diagnosis for reference purposes they can easily get with Dr. Angle's classification

which, besides being scientifically accurate, has the added value of extreme simplicity, and we can discuss malocclusion with them more intelligibly and more easily with Dr. Angle's terminology than with Dr. Lischer's, for Dr. Angle's terminology relates the malconditions of teeth, dental arches, and jaws to occlusion, and keeps prominently before the mind the fact that these abnormalities are conditions of deviations from normal occlusion.

SOCIETY PAPERS



Duties of the Dentists to the Public.

JOHN W. DOWD, L.L.D., Toledo, Ohio.
Ex-Superintendent of Public Institutions, Toledo.
Read before the Colorado State Dental Society.

Mr. President, Ladies and Gentlemen: When I was asked by the dentists to go into this work, the statement was made that only about eight per cent. of the people of the country paid any attention to the care of the teeth and the cleaning of the mouth. If that be true, the duties of the dentist have to do with the other ninety-two per cent.

In Ohio, the school children were examined, and out of 1,800, about 1,400 had from two to three points of decay in their mouths, and among the 1,400 there were forty-seven cases discharging pus into the mouth, mixing it with the food and drinking water, and thus passing into the alimentary canal. When I was talking once about what is to be found in a foul mouth, a young woman in the audience gave a cry, and fell over, and they carried her out. Many people said it made them sick to hear me tell what is in the mouth, but it is much worse to have it there. About five of the dentists had a meeting when I was there, and they asked the Board of Education to allow them to make dental examination of the children in the public schools. The Board granted their request. There were over ninety-nine per cent. of the children in the schools that required dental attention.

I was in Toronto last fall, and talked to the teachers there at the instance of the Y. W. C. A.; about two hundred of them. The meeting was attended by some of the medical health officers of the province, some of the dental profession, and even one of the cabinet officers was there. Of the children in the public schools there, there were forty-three and a half per cent. cases of malocclusion; proper mastication in less than 65½ per cent.; inflamed mucous membranes, 27 per cent.; enlarged glands, 28 per cent.; mouth not clean, 71½ per cent.; number of teeth lost, 61¼ per cent.; number of teeth filled, 6/10; 6,000 cavities, veritable breeding

places for germs of diseases; abscesses, 41 per cent. Think of it, 41 per cent. having pus exuding into the mouth; 31½ per cent. suffering from toothache. This was all placed before the members of the school board. They threw up their hands and said they recognized the importance of the examination, and the absolute necessity of doing something was more important still. They said they wanted the dentists' advice, and whatever they recommended would be done as soon as they could provide the necessary funds.

The doctrine that I am preaching is that it is the duty of the public school to attend to the training of the health just as much as to attend to the training of the mind. A well trained mind is of no use unless there is a good, strong body to go with it. It is like a handle to the axe; the axe is useless without a handle, and the mind is useless without the handle of a strong vitality. It is said that Dr. Osler said that a man should be put out of the way at sixty. I do not believe it, and the doctor did not either. He is past sixty himself, and his mother died at the age of ninety. Dr. Osler meant if he were sick or defective, or addicted to alcoholism, or was not a useful man. Age is not a matter of years, so much as a matter of preservation and health.

We should begin to educate the public in regard to their health, and the care of their teeth; to educate them along the lines of oral hygiene. Look at our school-books; they devote fifteen to twenty pages to the effects of alcohol, and pass the subject of teeth with a page and a half. There are many more evils resulting from defective teeth than from the use of alcohol. There ought to be compulsory examinations of teeth, and more attention paid to defective teeth than to the spread of alcoholism.

In all of our public schools there should be stereopticon slides. It makes the talks more effective. There should be a room in the building that can be darkened in the daytime. I go from building to building carrying my slides. Get the teachers interested. You can do better work under the supervision of the teachers. It is the business of the dentist to create a public sentiment in favor of this movement that will wake them up to the vital necessity of oral hygiene, and what you are doing for the physical welfare of the children under their charge. It is impossible to disconnect this subject of oral hygiene with education.

When I was coming through Kansas, which to me looked like a great American desert, I wanted a drink of water, but there was no glass. I went away from Kansas with a great deal of satisfaction in what she is doing along the line of preserving public health.

A very young girl came to a Chicago dentist with a sore on her lip, and it was pronounced to be an unmentionable disease, contracted through the use of public drinking cups. Kansas has prohibited the public drink-

ing cup; they are not kept in any public places; trains passing through that State are not allowed to have them in use. This is a good example for other States to follow.

In Indiana Dr. Hurdy's talk is beginning to tell. He tells the story of a woman in Indiana who wrote to the public authorities asking for aid in a case of tuberculosis. She wanted something to be done to protect her child. But they said they could not do anything for her. A neighbor of hers had a herd of swine who were affected with cholera. He wrote to the Department of Agriculture, and a man was sent out to investigate this hog cholera, and measures taken to prevent its spread; *but the woman died.* The moral is that if you want the Government to pay any attention to you, be a "hog." When Senator Owen made that speech in the Senate it fell on deaf ears. They were too busy investigating the question of whether Ballinger had done his duty.

It is time we were realizing that people are our greatest assets. We must be taught how the lives of people can be saved. More depends upon the physical man than we ordinarily think of. There are very few people who would be recorded as above 90 per cent. of what they should be in health. A lot of men going about are but half men. They average from 50, 60 to 70 per cent. The dentist is the man outside of the surgeon who can do for the people the greatest service. The dentist can do more to fight disease germs than any one. This oral hygiene is the defense that will prevent bacteria from entering the body. The dentist occupies a position of honor in the business of health, strength and beauty of the nation. I would ask you to appoint a committee for the spread of oral hygiene. I feel like another John the Baptist, crying aloud in the wilderness. I want to preach and spread the message of oral hygiene. We are giving the subject of commission government a great deal of attention, but I want to repeat to you that the foundation of our government should begin with the individual. I like to see a healthy man. He is good to look at. That is what we need. I like to see a man so healthy that he feels no weakness; so healthy that he should wonder that men and women groan with pain. All honor to the men who make sick people well; who take crooked things and make them straight. A healthy man has a mind as vigorous as his body. If he has not a healthy body, his mind is weakened. I like to see women strong and beautiful; helpmates; women that can be mothers of a mighty race, fit to bear the children that will be strong and noble citizens. I like a woman to be beautiful. You never saw a beautiful woman who did not have a fine mouth. The dentist has much to do with beauty. The strength of Rome was her strong men. I like to see dentists realize the dignity and importance of their profession. I want them not merely to be "tooth carpenters," but to look upon the

preservation and care of teeth as a noble profession. Be a live dentist; bring your profession up to what it should be. The dentist occupies the first place among the benefactors of humanity. The dentist can keep up the defense against the disease germs, because he stands in the gate-way with the sword of sanitary science in his hand ready to strike down the malignant disease that have been our greatest foes.

I have talked to you enough for to-day, but I could talk on this subject until doomsday. The thing to do is to act, or all of the talk will go for naught.

Discussion.

Dr. Fynn. I am glad we have a new John the Baptist preaching a new gospel to the world. I believe he is doing more good than the original John. He has a greater field to work in. He has more intelligent people to work upon. He makes the remark that the dentist has more to do with the good of public health than any one else. That is saying a great deal, but he backs his argument with facts. You know, and I know, that this is an age where, in every profession, the work is tending all the time toward socialism in a modified degree. In all the professions they are making the individual subservient to the community. We, as dentists, have usually heretofore simply appealed to, or worked upon, the individual, rather than upon the community. The time is coming, if it has not already arrived, when conservation of public health, irrespective of the individual, will be considered. Take the person suffering from smallpox. He is confined while he is sick, put in prison, as it were. He has his rights under the constitution, he should not be confined for something for which he is not responsible. He is unfortunate, in contracting this awful disease, and he is confined in this prison during his sickness for the protection of the community in which he happened to be at that particular time. It is the good of the public, of the many people which must be subserved; the individual must suffer for that particular good. This is well illustrated among the physicians. They are away ahead of us in that particular. You may be sick anywhere in the civilized world—you will find a place where you can be taken care of. Your wants will be amply supplied.

The best place to start this new doctrine of oral hygiene is among the school children; to have it reiterated, as it has been so excellently presented by Dr. Dowd. We know its importance, and it is best to begin with the young child. There is a saying in the Catholic Church, "That if you will give me the control of the child for the first seven years I care not what happens to it afterwards." That means that if the Church can

have control of the child for seven years, no matter what may happen the chances are that the child will remain a Catholic. When the child is young his mind is in a receptive state, easier to respond to teaching. You can instill in him things you cannot instill in an older person, like sowing seeds on good ground. As Dr. Dowd and Mr. Lindsay said last night, a child physically well, mentally well, will grow into a good citizen always. You and I can do good work under those circumstances. With exposed pulp in cavities, causing malnutrition, the child is handicapped in the run for life. He becomes discouraged, and does not want to go to school. When he quits the school he joins the gang, if he lives in the city. If he joins the gang, his career is started. That gang needs money; there is only one way to get it; he steals. That is the beginning of the end. Then he is sent to the Reform School; after two or three years he comes out generally more of a criminal than when he went in. It is the business of the State to put such a child into a good physical condition, which would be much better for the child, and would cost very much less than the maintenance of courts, reform schools, and the like.

President Wheeler, of California University, in addressing a dental convention a short time ago, said he did not think the dentists were doing much good for the community or for humanity. He said: "The principle thought and interest of your life is a little book, 3 by 5 inches, in which you jot down appointments, and if you fill that book for two or three weeks ahead, you are satisfied with yourself; you have reached the height of your ambition. You owe something to the community." I think perhaps there is a great deal of truth in his statements. I think that we, as dentists, do not come up to the standard that we should reach. We are superficial; we simply look ino a mouth, and we see a cavity to be filled, a bridge indicated, or perhaps pyorrhea to be treated; and then we see our fee. The fee comes in ahead; we do the work, and we collect that fee.

Dr. Evans says we do not take into consideration the surroundings; we do not take into consideration the home of that individual; the environment. We do not take into consideration the loss of health; the systemic condition is overlooked. We should find out the condition of the blood, and whether there is a method of preventing the bad oral conditions we find. It is for the interests of the State, of the country that we should do these things. We want the boys and girls in this land to grow up healthy, so that they will develop into responsible and law-abiding citizens.

Dr. W. A. Brierly.

After hearing the fine addresses of Dr. Dowd last night and to-day, one must feel that the duty of the dentist to the public is not only a serious one, but

that the recognition of its seriousness and the assumption of its obligations cannot much longer be neglected. The public is looking to us for reformation. Only about eight or ten per cent. of the public come to us at our offices, so the question arises, "How can we arouse their interest, and reach the rest of them." When Dr. Evans was put in charge of the Health Department of Chicago, he turned the whole staff under his command into a great lecture force, talking and preaching every time they could find a listener, circulating the doctrine of sanitary methods and good health. The public is ignorant on these subjects. It has been my experience to know many newspaper editors and reporters, and I think it safe to say that they are above the average man of intelligence, but I have a sample of appalling ignorance on their part. These things that seem so simple to us are wholly foreign to them. I want to read something to you that appeared in an eastern paper recently:

Newspaper Ideas on Dentistry.

"Several people are affected with a new gum disease. Pyorrhea or ulceration is the name of that disease. One death has been caused by this disease, and a number of patients are now in a serious condition at a local hospital. One woman had six teeth drawn, and it is reported that she may be able to recover. One danger is that the condition of the patient may reach such stage that the teeth can not be drawn without producing fatal results. The disease originates with decayed teeth. One of the symptoms is a hardening of the gums; finally, the whole system becomes permeated, thereby causing death. When a tooth becomes decayed, poison is mixed with the saliva, and carried to the stomach, and indirectly gets into the blood. Ulceration of the tooth aggravates the conditions, and is more liable to cause death. One of the habits which have become prevalent is sucking the teeth. The dentists say this is apt to result seriously, and is worse than biting the finger-nails, etc. The best way to avoid these affections is to keep the teeth in a good state of repair."

This shows very plainly the necessity for this newspaper campaign of information for the masses, spoken of yesterday, and taken up by Dr. Warner's brother in Illinois.

Let us emulate the example set for us by Dr. Dowd and Dr. Evans, and go home from this meeting determined that we can become teachers, and educate the public in the new doctrine of oral hygiene. Give them some facts, and then give them more facts; but we must teach ourselves the facts first, so that we will be sure of our subject, and on every propitious occasion be able to present this subject of oral hygiene in a dignified and proper manner. Let us show the people of Colorado that we are live dentists, the live ones that Dr. Dowd spoke of a few minutes ago.

Dr. Adams. I believe that we all appreciate the importance of agitating this question of oral hygiene among the citizens of Colorado. I would propose that the State Dental Society of Colorado authorize the purchase of a complete equipment, with full paraphernalia, for the spread of the noble doctrine of health. This should come to a question for decision before this session closes. I want to see the work started, because of its influence in leading to effective legislation in this State. We need a more effective State Society organized, that can carry on the work in a more satisfactory manner. That is all.

Dr. Redmond. There are men and women in this society who can write good papers, and make good speeches on oral hygiene, and it would be my suggestion that when our schools open this fall, that we request the School Board to give certain members of this society opportunity to address the school children of Denver.

There is not a practitioner in this audience who has not had a patient come into his office and ask to have only a certain piece of work done. You find other work that should be done, but the patient says that he cannot afford to have it done at once. Then you drop the subject, and look to your next patient. You lose sight of the necessity of doing anything further than that which you were asked to do. When you know the effects of this continued negligence, and the patient does not, it is your duty to be persistent and try to make him see it as you do.

I spend a good deal of time explaining to my patients what they need; doing more than just what they ask me to do. I sometimes feel that this is one of the things that makes some people successful in practice, and that some others are not successful, because they fail to do that.

Dr. Geo. R. Warner. It has been the ambition of the School Board at Grand Junction to improve the physical condition of the public school children of that city. This year we have been able to put in a director of physical culture. One man gives his whole time to the physical department of the schools, goes from one building to another in District No. 1, and the teachers are glad to do anything they can to improve the condition of the children, either mentally, morally or physically.

These sentiments and works apply to every School Board in this State. The schools of the State of Colorado average higher than any other State in the Union. I know this to be true, from information received from those who have visited the schools throughout the United States.

As a member of the School Board of Grand Junction I would be very glad to do anything that I could to propagate the doctrine of oral hygiene, and help the movement. As a practicing dentist, I feel a little backward about presenting the matter to the School Board myself, but will do all I can indirectly.

I think it would be a good plan for the State Society to formulate some plan for the furtherance of this movement, so that this matter could be presented from the State Society to the School Boards of this State. I think the matter could be gotten at in a better way by that means than any I know of. I make a motion that we purchase some equipment, as was suggested by Dr. Adams. I spoke to Dr. Dowd about the cost of a set of slides; he said it would be about $25. The cost of a set of charts would be $5. I think $50 would be ample for one complete outfit to use throughout the State. It could be used in the way the tuberculosis exhibit was presented from school to school. It might be better to have more than one outfit.

I now make the motion that this society authorize the purchase of an equipment for the purpose of propagating the doctrine of oral hygiene at a cost not to exceed $100.

President. Ready for the question. All in favor signify by saying aye. It is so ordered. Is there any further discussion of the Dowd paper?

Dr. Dowd. I have this further remark to make. Strike the iron while it is hot. If the iron is not hot, strike it until it gets hot, and keep on striking to keep it hot. Keep up this agitation, let it be more than mere talk; keep it up until we have a dental clinic in every school. The care of the teeth and their preservation are as important as the training of the mind. We want to keep this up until we have dental instruction in every school. It is a good thing. Every child who is not able to receive attention should be taken care of by the public. In Findly, Ohio, 1,400 children showed that they ought to have dental attention. A chart was made of every mouth, and if the parents were unable to pay for the work the dentists took care of it for a year. Some woman's association paid for the material used. But the dentists have no reason to be engaged in charity work for more than a year, and it is the business of the State to take this upon themselves. We will look for the good time coming, and we will look for it until the School Boards of this country will provide dental care for the children that are unable to provide it for themselves. We want every child to have a fair chance in the race for life, and be able to do his share of work without any handicaps.

Oral and Dental Therapeutics.

A Branch of the Dental Curriculum, Wherein, We As a Profession are Found Wanting.

By Joseph Kussy, Ph.G., D.D.S.

Read before the Clinical Club of New Jersey, Jan. 10, 1912.

In order to fully appreciate the seriousness of this accusation, it is necessary for us to understand, first of all, what is meant by oral and dental therapeutics, in the full sense of the words.

Therapeutics is the science which treats of the application of remedies or drugs to the treatment of pathological conditions. When we apply such treatment to the teeth or the mouth we engage, necessarily, in the practice of dental or oral therapeutics.

It is manifest that in order to properly and conscientiously practice this science, a thorough knowledge of the remedies, together with an ability to properly combine such remedies, at times, for a more certain effect, is absolutely essential.

Are we, as a profession, thus qualified? Do we give sufficient time and study to this very important branch of the curriculum?

Our offices are flooded with nostrums, each manufacturer extolling the virtues of his own product, and some of them being heralded as panaceas for all the ailments that come under the notice of the dental practitioner, from pyorrhea to syphilis. In sorrow be it said that many of these nostrums, the composition of which is in some cases entirely unknown to us, have found their way into the daily practice of many, and have even been prescribed again and again for the use of patients by men prominent in the dental profession and who stand pre-eminent in certain lines of work.

Is it not surprising—aye, is it not shameful—that with the vast number of remedial agents at our command we sometimes look to the lay manufacturer to supply a remedy for existing conditions?

Your essayist maintains that the dentist or physician who deliberately uses or prescribes for his patients any remedy of which he does not know the exact formula is either acting without conscience towards his patients, or is placing upon himself the badge of ignorance.

Antiseptics and Germicides.

The most frequent agents with which we are thus favored by the mercantile houses are antiseptics and germicidal washes (so claimed to be).

The antiseptic agents with which we are most familiar are: The essential oils, phenol, boric acid, alcohol, sodium benzoate, thymol, menthol, sodium borate, iodine, beta-naphthol and the silver

salts. Besides these, we have the more powerful disinfectants, such as formaldehyde, cresols, mercuric chloride, etc.

Why should we not ourselves select from these valuable drugs, when in need of an antiseptic wash, those which are indicated by the case under treatment?

Of the drugs mentioned, beta-naphthol is invaluable as an active antiseptic. While possessing properties similar to carbolic acid, it is far less toxic, and on account of its irritating propensities it acts, when in proper solution, as a mild stimulant to the diseased mucous membrane. A good formula is:

Beta-Naphthol ..... grs. xii
Spts Vini Rect.
Aquæ Destil. ..... āā ℥i
Ft. sol.

Sig.: Teaspoonful to wineglassful of water as a mouth wash.

There is one well-known proprietary preparation which is rich in glycerine, and is well known for its osmotic action and its soothing and healing effect on mucous surfaces. This is reproduced in the National Formulary under the name *liquor antisepticus alkalinus,* its constituents being: Potassium bicarbonate, sodium benzoate, sodium borate, thymol, eucolyptol, oil of peppermint, oil of gaultheria, alcohol, glycerine and water.

In choosing antiseptic remedies for pathological conditions we must exercise much discretion. Rhein, Buckley and others are not disposed to rely much on the efficacy of antiseptic washes for ordinary purposes. Modern surgery teaches us that powerful antisepsis interferes with the physiological process of granulation. Powerful antiseptics and germicides also, while of much value in the treatment of putrescent root canals, will, when in contact with soft tissue, not only destroy the bacteria, but also the cellular structure of the tissues themselves. We should, therefore, choose for a mouth wash, when one is indicated, one which is only sufficiently antiseptic to retard infection and stimulating enough to the animal cells to aid them in combating bacterial invasion. Either one of these washes is well adapted for this purpose.

Anaesthetics. We will omit from this paper any references to general anesthetics, except to state our belief that in the near future nitrous oxide will be considered the ideal anesthetic, not only in minor surgery, but in combination with pure oxygen in major operations.

Under the head of local anesthetics, we come to one of the most vital problems which we, as dental practitioners, are called upon to meet.

Here again the profession is humiliated by the common use of various proprietary remedies, known to contain cocaine. It would be a sad reflection on dental progress in therapeutics, if, in dealing with so deadly a drug as this, it were necessary for us to resort to a proprietary combination to administer it. As a matter of fact, the time has come for us to call a halt to the use of cocaine for anesthesia.

Cocaine. In our report to the New Jersey State Society, for the Committee on Materia Medica, we boldly protested against its use hypodermatically in dental and general surgery. No less an authority than the late Prof. H. C. Wood, Professor of Materia Medica and Therapeutics, at the University of Pennsylvania, is quoted as absolutely opposed to the use of cocaine in hypodermic injections.

A recent compilation by Dr. John D. Thomas, of Philadelphia, shows an alarming array of statistics bearing on this matter. We beg leave to remind you of the following effects of cocaine anesthesia: Paralysis of the adjacent nerves, causing the drug to act directly on the circulation, the paralysis ending frequently in sloughing of the gingivæ and necrosis of the adjacent alveolus, and, most important, the temporary, and in some cases permanent cutting off of nutrition to the parts affected by the anesthesia. Furthermore, we know that idiosyncracies do exist, and minute doses may produce alarming toxic results.

What drug then should assume the important place so long held by the one we wish to discard. The substitutes are eucaine, beta-eucaine, neurocaine, tropacocaine and novocaine.

Novocaine. After considerable study and experimentation, we have found novocaine to be the most desirable. It possesses a powerful anesthetic action, and is far less toxic than cocaine. Its advantage over the other substitutes for cocaine is its lesser irritating qualities. It should be used in 1½ per cent. to 2 per cent. solution, and may be combined with adrenalin. The following formula is a most desirable one:

Novocaine	grs. viii
Sodium Chlorid	grs. iv
Aquæ Distill.	℥ i

The powders may be combined in capsule form and dissolved in the water when wanted. When ready for use, two drops of sol. adrenalin (1-1000) may be added for each dose.

Antacids. The principal antacids are the sodium salts (bicarbonate and borate), calcium carbonate, magnesium oxide and liquor calcis (lime water).

Astringents and Haemostatics.

In connection with the lime salts it might be well for us to mention the chloride of calcium, not as an antacid, but for its remarkable properties in hemophilia.

Before any surgical operations, and particularly before extractions, where the hemorrhagic diathesis is known to be present or is suspected, the patient should be given calcium chloride in ⅓ gr. doses three times a day after meals for several days prior to the operation. This drug has been found invaluable for this purpose.

Ergot in the form of the fluid extract (dose ½ to 1 fld. dram) is also effective, but should never be administered to women during pregnancy on account of its abortive powers.

The other astringents and hæmostatics of importance are tannic acid, krameria, alum, zinc chloride and sulphate and lead acetate, all these being for local use only.

Caustics and Escharotics.

The chief caustics for use in dental practice are the mineral acids, phenol, trichloracetic acid, lactic acid, zinc chloride, silver nitrate and arsenic trioxide or white arsenic.

In pyorrheal pockets the trichloracetic acid is found to be effective not only for its escharotic action, but also for its stimulating characteristics.

Under this heading should also be mentioned Schreier's combination of sodium and potassium. This preparation, when introduced into putrescent root canals produces complete saponification of the contents, which may then be removed by flooding with warm water.

Irritants and Counter-Irritants.

The most important remedies for producing counter-irritation are iodine, capsicum, mustard, chloroform and oil of turpentine. The one most frequently used is the tincture of iodine. In the essayist's opinion it is a mistake to combine this with the tincture of aconite for counter-irritation, on account of the depressing effect on the sensory nerve fibres, exercised by the aconite.

Nearly all the remedial agents thus far mentioned have been for local use as distinguished from general remedies, or those intended for internal administration. If we are to maintain our status as specialists in medicine, we must familiarize ourselves as much with the latter remedies, in so far as they relate to our specialty as with the former.

We are frequently called upon to combat a rise in bodily temperature during the acute stage of alveolar abscess. Here the administration of an antipyretic is imperative in conjunction with the use of a saline cathartic.

The coal tar derivatives, phenacetin, acetanilid or antypyrin, as well as the old stand-by, quinine, are invaluable. While much has been said as to the danger of promiscuously prescribing the coal tar products, the fact remains that the intelligent practitioner will find in them a valuable aid in overcoming the febrile and painful conditions coincident with the formative stage of alveolar abscess. The average dose of these drugs is five grains three times a day. It is useless in these cases to prescribe any hypnotic such as trional or sulphonal. They are apparently worthless. The only drugs which are powerful enough to overcome pain of dental origin, whether caused by alveolar abscess or by reflex disturbances of the trigeminal nerve, are opium and its alkaloids, morphine and codeine. In extreme cases it is not only our prerogative but our duty to prescribe them.

The salts of morphine and codeine being more soluble than the alkaloids should always be given the preference. Morphine sulphate should never be administered by the dentist in doses larger than ¼ gr., nor codeine sulphate in doses larger than ½ gr. We thus do our duty to our patients without incurring the risk of unfavorable criticism.

It is our duty as dentists, moreover, to be thoroughly familiar with the cardiac stimulants. We are probably called upon to treat sudden collapse or syncope quite as frequently in our offices as is the general practitioner of medicine. When this occurs, it calls for immediate action on our part. Although the aromatic spirits of ammonia will suffice in some cases the tablet triturates of strychnine sulphate (1/60 to 1/30 gr.) should always be at hand.

I have endeavored to give a brief, concise outline of the drugs most frequently used in dental practice, and a few others of sufficient importance to merit more recognition, at the same time pointing out to you that we are not all maintaining the rapid pace on the road of progress in this branch that has been set by other branches of our chosen profession during the last decade.

If my humble efforts shall serve to point the way in which that progress lies, and if I shall find some support to my claim that proprietary preparations of uncertain formulæ should be eliminated from our practice, I shall indeed be grateful.

EDITORIAL

The Peculiar Attitude of the Illinois State Dental Association Towards the Reorganization of the National

In our last issue we reported that Arizona, Connecticut, District of Columbia, Maryland, Michigan, Ohio and Rhode Island had passed resolutions indorsing the plan for reorganizing the National Dental Association, and agreeing to become constituent societies thereof. Since May 1st, Massachusetts and Vermont have voted to affiliate with the Reorganized National, each promising two-thirds of its members. From the above states alone, approximately two thousand members may be counted upon, which at two dollars per year would yield about the same income as that at present paid into the treasury of the National.

Action of New York.

At the meeting of the New York State Dental Society a peculiar situation developed. This was perhaps the first State Society in this country to have District Societies, but the members of these District Societies have never been *de facto* members of the State Society, and under the State Society's charter it could admit but eighteen new members annually. At this last meeting, however, it was decided to reorganize the State Society so as to include all of the District Society members. This will increase the New York State Society membership from less than three hundred, to over fifteen hundred. It was not deemed expedient at this critical moment to guarantee any definite proportion of this member-

ship to the National, but the New York State Society voted to affiliate with the National, and the general understanding was that by the 1913 meeting of the National, New York would either come in with its entire membership, or at least could add one thousand new names to the National list.

The Action of Illinois.

In 1907 the Illinois State Society passed a resolution recommending to the National that it should take steps to reorganize so that "There may be established a similar relation between the National Dental Association and the various State organizations, to that existing between the American Medical Association and the various State Medical Societies." It was therefore confidently anticipated that the resolution of the National Dental Association to reorganize "along the lines of the American Medical Association" would have been received with approval by Illinois, and that the men of that State would have come forward loyally to aid the movement. It was with much astonishment therefore that the news was received to the effect that Illinois, at its recent State meeting, adopted the following preamble and resolutions:

Resolutions regarding Reorganization of the National Dental Association passed by the Illinois State Dental Society, May, 1912.

WHEREAS, The Illinois State Dental Society was reorganized in 1904, and as a result has since that year maintained a membership of from 1,250 to 1,700, as compared with less than 300 previously, and has wielded a correspondingly greater influence for the betterment of dentistry and dental service in the State of Illinois, and

WHEREAS, Many other State dental societies have since reorganized on plans more or less similar to the Illinois plan, with equally beneficial results, and

WHEREAS, There has, during the past few years been considerable agitation for the reorganization of the National Dental Association, without satisfactory results up to the present time, and

WHEREAS, The Executive Council of the Illinois State Dental Society does not consider the plan presented to this society by the Committee on Reorganization of the National Dental Association to be a practical solution of the question, and

WHEREAS, The Illinois State Dental Society is desirous of furthering plans for a properly organized and efficient national association; therefore, be it

Resolved, By the Executive Council of the Illinois State Dental Society, that a committee of three members be appointed to develop plans looking toward the end desired, and be it further

Resolved, That said committee be empowered to invite the presidents

of other reorganized State Dental Societies to appoint representatives to a meeting to discuss such plans, in the hope that those men, who have had experience in the work of reorganization in these several States, may agree upon plans which will be acceptable to their respective States.

The action of the Executive Council in passing the above resolution was approved by the general body of the Society.

We have here a lengthy, and evidently carefully prepared set of resolutions, and unless the writer is wofully ignorant of the true meaning of the English language, the following deductions may be fairly drawn:

First, nowhere do we find any indorsement of the proposed reorganization of the present existing National Dental Association. On the contrary, we are told that all efforts in this direction have been "without satisfactory results up to the present time." Next, the Illinois Society is desirous of furthering plans for a "properly organized and efficient National Association." It is not stated that Illinois is desirous of seeing the present National efficiency reorganized. Then, the Executive Council is empowered to appoint a committee of three to prepare plans to this end, and further empowered to invite the presidents of reorganized state societies to appoint similar committees, all of whom shall meet together to discuss such plans, "in the hope that those men who have had experience in the work of reorganization in these several States, may agree upon plans which will be acceptable to their respective States."

Is it true that the efforts at reorganizing the National Dental Society have thus far been without satisfactory result? No! It is not true! Is it necessary at this late hour for Illinois to call a meeting of committees from State Societies to discuss reorganization of the old National, or organization of a new National? No! It is not necessary. On the contrary, it would but hinder a movement already assured of a grand success.

All that Illinois proposes has already been done. The reorganization plans of the National have developed slowly, only that they might be maturely considered and properly constituted when presented for final adoption. That is why, at Denver, instead of taking precipitate action, and attempting to adopt immature reorganization plans, after calm deliberation it was decided to invite every State Society to send a special delegate to Cleveland to confer with the Committee on Reorganization. This was carried into effect, and a more interesting and more orderly discussion of State Society conditions, which should be considered in forming

a great national body, built with State organizations as fundamental units, could scarcely have been anticipated. The new proposal from Illinois could not bring together a more earnest nor a more representative body of men. Illinois was invited to that conference, but neither its delegate nor its alternate was present, for which reason perhaps they are unaware of the fact that such a meeting as they now propose has already been hel l, and therefore is not now necessary.

The Action of Indiana.

The writer submits to his readers the question as to whether or not he has fairly interpreted the resolutions passed by Illinois? He is in some doubt, because the following letter, sent by Dr. Arthur Black to the Indiana State Society meeting, appears to place an entirely different interpretation upon the intentions of Illinois. The letter is herewith presented in full:

CHICAGO, May 20, 1912.

DR. OTTO U. KING, Secretary,
Indiana State Dental Association,
Indianapolis, Ind.

DEAR DOCTOR: I enclose herewith copy of a resolution passed last week by the Illinois State Dental Society relative to the reorganization of the National Dental Association. As chairman of the committee of our society appointed in accordance with the resolution, I am writing to invite the Indiana State Dental Association to appoint a representative who will join with us in an attempt to further the solution of the problem.

Our society has no desire to antagonize the efforts which are being made to bring about a satisfactory reorganization of the National, but we feel certain that material changes must be made in the proposed plan in order that its acceptance may not work serious injury to those State Societies which are already well organized. We believe that a meeting of the representatives of the already reorganized societies would bring to light the principal objections to the present plan; also that such representatives would be able to suggest changes which would be acceptable to their respective States. A State Society which has not been reorganized should have little difficulty to pledge two-thirds of its membership to join the National; it is quite a different proposition with a reorganized society having anywhere from 500 to 1,700 members, many of whom know practically nothing of the National Association. We feel that there would be danger in such a pledge, in that it might cause a serious loss to our present membership if we should force two-thirds to join the National.

We are very strong in the belief that a plan can be developed along a little different lines by which the entire membership of all of the reorganized societies can be carried to the National, and it is the detail of such a plan that we wish to present to your representatives.

If your society is inclined to vote in compliance with the request now before you from the National, that need not interfere with the appoint-

ment of a representative to meet with our committee, nor should your contemplated action be in any way interfered with as a result of the consideration of our resolutions. The constitution of the National is in such condition that almost any desired change can be made at the September meeting. The important problem is to decide what changes will make it most acceptable to the reorganized State Societies. Those States which are not reorganized can easily do so in accordance with whatever plan is adopted.

We are inviting representatives of the following States to meet with us: Pennsylvania, Ohio, Indiana, Kentucky, Michigan, Wisconsin, Minnesota, Iowa, Missouri, Nebraska, Kansas and Oklahoma. We think a meeting should be held during the month of June, the exact time to be determined a little later on.

With best wishes for the success of the reorganization movement, I am,

Very truly yours,
ARTHUR D. BLACK, Chairman.
Committee of Illinois State Dental Society:
G. W. Dittmar, A. E. Converse, Arthur D. Black.

As Dr. Black, the Chairman of the Illinois Committee, must fully understand the wishes and intentions of his society, it becomes evident that the resolutions presented by the Illinois Council, and adopted by that society, were most unfortunately worded, for from him we learn that Illinois has no desire to impede the progress of reorganizing the National. He believes that, with alterations, the plan of reorganization can be made satisfactory, and it seems to be his idea that the meeting planned by Illinois could be held in time, so that the societies invited could first advise together, and then advise with the National Society itself. Dr. Black intimates that several changes in the proposed plan must be made; but the only point which he discusses is the fact that many of the large recently reorganized State Societies could not guarantee two-thirds of their membership without self injury. But this fact is quite as well understood by the Committee on Revision, as it is in Illinois, and the committee have no doubt that this is a problem *very easily solved.* As was fully explained in our editorial last month (a copy of which was filed with the Illinois Society's officers), *the proposition that each constituent society should promise two-thirds of its members to the reorganized National was only tentatively put forward as a possible means of discovering just how many members might be counted upon after reorganization.* This purpose has been served, because the societies which have already guaranteed two-thirds of its members, together with Indiana, which has promised one-

half of its nine hundred members, will more than treble the present membership. But it is not necessary for a State Society to guarantee two-thirds of its membership. Those that have done so will undoubtedly keep their promise, while Michigan, New York and Indiana, without such guarantee will bring in from fifteen hundred to two thousand more.

We have now to report that Indiana did not accept the Illinois invitation, but passed the following resolutions:

WHEREAS, The Indiana State Dental Association sent a representative to a conference held in Cleveland, Ohio, July 25, 1911, to co-operate with similar representatives invited from all State dental organizations, with a view of formulating plans for perfecting a more representative National Dental Association, and

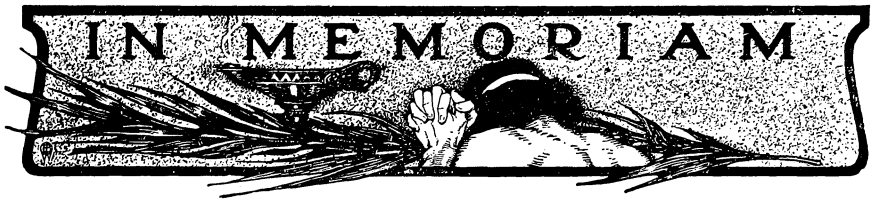
WHEREAS, 23 of the 24 representatives in attendance voted in favor of reorganizing the National Dental Association along similar lines to those of the American Medical Association, and

WHEREAS, Our State Dental Association voted unanimously May 21, 1912, to become affiliated with the National Dental Association in accordance with the constitution tentatively adopted last year at Cleveland; therefore, be it

Resolved, That the Board of Trustees of the Indiana State Dental Association does not look with favor upon the resolution passed by the Illinois State Dental Society, and fears that further conferences with representatives from different States will only tend to cause confusion and interfere with the present plans, which seem to be receiving most liberal support from a large majority of the State Societies, which have met since the 1911 National meeting.

The writer is glad that Indiana has made this reply to Illinois, and it is to be hoped that all the States still to meet will follow the lead of Indiana rather than that of Illinois, and this is said with due recognition of all that Illinois has done toward fostering reorganization of State Societies. If Illinois has a better plan than that under present consideration, or if, as Dr. Black intimates, he knows of a plan whereby all the reorganized State Societies could come into the National in a body (which, by the way, is one-third more than the two-thirds which we are told is such a hindrance), the loyal and generous action would be to communicate such plans or suggestions to the Secretary of the National Dental Association, Dr. Homer C. Brown, who is likewise Secretary of the Committee on Reorganization. Thus the Committee on Reorganization could take cognizance of the changes which Illinois deems essential, and if these changes proved beneficial they undoubtedly would be incorporated in the report which the committee must make at Washington.

Thus it is not necessary for any of the States that will receive the invitation from Illinois, to act as suggested; it is only needful for each society to vote that it will affiliate with the National and then to state objections, if it have any, and suggest changes. Let us hope then that every State Society, still to meet, will encourage the reorganization of the National. Let us hope that Illinois will send some of its strong men, those that have had experience in reorganization problems to advise with and aid the Committee on Reorganization. But in the good name of American dentistry, let us have no more delays. To paraphrase an old epigram, "The way to reorganize, is to reorganize."



Dr. F. B. Bosworth.

Dr. Frank Bosworth, about 66 years old, one of the leading dentists of Lexington, Ky., with offices in the Johns building, corner of East Main and Walnut Street, died at St. Joseph's Hospital at 8 o'clock Thursday night, following an illness of three weeks from complication of diseases. Dr. Bosworth's illness became serious a week ago, and since the first of this week his condition had been critical.

He was a bachelor, and is survived by two brothers, one sister and several nephews. His brothers are Messrs. Edward Bosworth, of Frankfort, and Wallace Bosworth, of Zanesville, O., the former of whom was at the hospital when Dr. Bosworth died. His sister, Mrs. George Newburry, lives in Portland, Oregon. Dr. Bosworth was a son of the late Mr. and Mrs. David Bosworth, and had made his home always in Lexington, and was a cousin of State Auditor Henry M. Bosworth, and a brother-in-law of Mrs. Sarah Bosworth, who lives in Lexington in Hampton Court.

Dr. Bosworth was one of the best-known dentists in Central Kentucky, and was regarded as an expert in prosthodontia.

Dr. Angus V. Rose.

WHEREAS, It has pleased Almighty God to remove from our midst by death our esteemed associate, Dr. Angus V. Rose, who entered into life eternal March 10, 1912, and

WHEREAS, Although one of the younger members of the profession, by his death this society loses a most earnest and respected member, and the profession an able and progressive worker; therefore, be it

Resolved, That we, the Syracuse Dental Society, feeling keenly the loss we have sustained, hereby express our sorrow at the sudden termination of the career of Dr. Angus V. Rose, and that this society hereby extends to the members of his immediate family its sincere sympathy, and be it further

Resolved, That a copy of these resolutions be spread upon the minutes of this society, and that a copy thereof be sent to his wife and to the dental journals for publication.

G. S. ROTH,
A. R. COOKE,
A. F. SMITH,
Committee.

SOCIETY ANNOUNCEMENTS

National Society Meetings.

NATIONAL DENTAL ASSOCIATION, Washington, D. C., September 10, 11, 12, 13, 1912. Secretary, Dr. Homer C. Brown, 185 E. State St., Columbus, O.

CANADIAN DENTAL SOCIETY AND ONTARIO DENTAL ASSOCIATION, union meeting, Hamilton, Ont., June 3, 4, 5, 6, 1912. Secretary, J. A. Cameron Hoggan, Federal Bldg., Hamilton, Canada.

AMERICAN SOCIETY OF ORTHODONTISTS, Chicago, Ill., July 1, 2 and 3, 1912. Secretary, Dr. F. C. Kemple, 576 Fifth Ave., New York.

State Society Meetings.

ALABAMA DENTAL ASSOCIATION, Tuscaloosa, Ala., June 11, 12, 13, 14, 1912.
Secretary, G. F. Petrey, Florala, Ala.

ARKANSAS STATE DENTAL ASSOCIATION, Little Rock, Ark.
Secretary, Dr. I. M. Sternberg, Fort Smith, Ark.

ARIZONA DENTAL SOCIETY.
Secretary, Dr. H. H. Wilson, Phoenix, Ariz.

COLORADO STATE DENTAL ASSOCIATION, Colorado Springs, June 20, 21, 22, 1912.
Secretary, Chas. A. Monroe, Boulder, Col.

GEORGIA STATE DENTAL SOCIETY, Americus, Ga., June 11, 12, 13, 1912.
Secretary, Dr. DeLos H. Hill, Prudential Bldg., Atlanta, Ga.

IDAHO STATE DENTAL SOCIETY, Idaho Falls, Ia., June, 1912.
Secretary, H. F. Kimball, Salmon, Ia.

MAINE DENTAL SOCIETY, Bar Harbor, Me., June 26, 27, 28, 1912.
Secretary, I. E. Pendleton, Lewiston, Me.

MINNESOTA STATE DENTAL ASSOCIATION, St. Paul, Minn., June 14, 15, 1912.
Secretary, Benjamin Sandy, New Syndicate Bldg., Minneapolis, Minn.

MISSISSIPPI STATE DENTAL SOCIETY, Gulfport, Miss., June 4, 5, 6, 1912.
Secretary, L. B. PRICE, Corinth, Miss.

MONTANA STATE DENTAL SOCIETY, Missoula, Mont., June 14, 15, 1912.
Secretary, Dr. T. T. Rider, Missoula, Mont.

NEW HAMPSHIRE DENTAL SOCIETY, Weirs, N. H., June 19, 20, 21, 1912.
Secretary, F. F. Fisher, Manchester, N. H.

NORTH CAROLINA DENTAL SOCIETY, Raleigh, N. C., July 3, 4, 5, 6, 1912.
Secretary, J. W. Stanly, Wilmington, N. C.

PENNSYLVANIA STATE DENTAL SOCIETY, Pittsburg, Pa., June 11, 12, 13, 1912.
Secretary, Dr. Luther M. Weaver, 7103 Woodland Ave., Philadelphia, Pa.

SOUTH CAROLINA STATE DENTAL ASSOCIATION, Isle of Pines, Charleston, S. C., June 18, 19, 20, 1912.
Secretary, Dr. W. B. Simmons, Piedmont, S. C.

TENNESSEE STATE DENTAL ASSOCIATION, Memphis, Tenn., June 6, 7, 8, 1912.
Secretary, Dr. J. L. Manire, Memphis, Tenn.

UTAH STATE DENTAL SOCIETY, Ogden, Utah, June, 1912.
Secretary, Dr. W. G. Dalrymple, 2421 Washington Ave., Ogden, Utah.

VIRGINIA STATE DENTAL ASSOCIATION, Old Point Comfort, Va., July 9, 10, 11, 1912.
Secretary, Dr. W. H. Pearson, Hampton, Va.

WASHINGTON STATE DENTAL SOCIETY, Spokane, Wash., June, 1912.
Secretary, Dr. F. B. Lynott, 249 Peyton Blk., Spokane, Wash.

WEST VIRGINIA STATE DENTAL SOCIETY, Webster Springs, Va., Aug. 14, 1912.
Secretary, Dr. Frank L. Wright, Wheeling, W. Va.

WISCONSIN STATE DENTAL SOCIETY, Oshkosh, Wis., July 9, 10, 11, 1912.
Secretary, Dr. O. G. Krause, Wells Bldg., Milwaukee, Wis.

National Dental Association.

Committee on Patent Legislation.

A hearing has been had before the House Committee on Patents in respect to the merits of the proposed legislation pending before that committee upon H. R. 20591, "Amending the statutes relating to patents, relieving medical and dental practitioners from unjust burdens imposed by patentees holding patents covering methods and devices for treating human diseases, ailments, and disabilities," etc., etc.

This bill was introduced at the request of the Committee on Patent Legislation of the National Dental Association, and its consideration and passage depends upon the support given it by the State and Local Dental Associations throughout the United States. The coming meetings of these bodies are such as to keep up a constant agitation before Congress,

if the officers and members unite, and pass, and forward petitions and resolutions endorsing the same to the members of the Committee on Patents of the House of Representatives. It is to be hoped this will be done at once, and that it will end in the passage by the Congress of the legislation proposed by your committee.

The Committee on Patents of the House of Representatives are as follows:

William A. Oldfield, of Arkansas, Chairman.	Oscar Callaway, of Texas.
Martin A. Morrison, of Indiana.	Samuel A. Witherspoon, of Miss.
Edwin Y. Webb, of N. C.	Frank D. Currier, of N. H.
Frank Clark, of Florida.	E. Stevens Henry, of Conn.
Joshua W. Alexander, of Missouri.	William W. Wilson, of Ill.
R. J. Bulkley, of Ohio.	Irving L. Lenroot, of Wis.
	William H. Wilder, of Mass.

Martin W. Littleton, of New York.

The dental profession is confronted by a situation similar to the litigation of the "Goodyear Rubber Plate" and the "International Toothcrown Co." upon process patents, owing to the lack of support to this same legislation some ten years ago by the profession. The "Taggart v. Boynton" litigation is now confronting you, and while this bill cannot affect that litigation one way or another, it will serve to bar any such litigation for the future. We thought we were safe after the "Goodyear Co." were stopped from claiming tribute from the profession, and then came the "International Toothcrown Co." and we were again forced to battle in the courts of the land. That was stopped by the Dental Protective Association's efforts, and we again felt that our profession was safe from future efforts of this kind, and now comes the "Taggart v. Boynton" litigation to prove our assumed safety to be wrong again. Let us now, by united effort, prevail upon Congress to so legislate as to preclude further embarrassment of this nature to the members of the dental profession. Congress will take no action if the profession and its representatives do not, by their actions, show that they desire it. The proposition is now up to the Dental Associations. "Ask, and it shall be given unto you."

Emory A. Bryant, Chairman, Washington, D. C.
Chas. R. E. Koch, Secretary, 67 Lake St., Chicago, Ill.
C. N. Johnson, Chicago, Ill.
Committee on Patent Legislation, N. D. A.

Societies receiving favorable answers regarding the passage of the bill will please communicate the names of the same to the committee above.

Committee on Oral Hygiene.

The XV International Congress on Hygiene and Demography is to be held in Washington, D. C., Sept. 23-28, 1912, under the auspices of the United States Government.

This is the most important meeting of this kind held in this country in its history; and the United States Government is acting as host to the fifteen nations that have so far signified their intention of participating in the coming Congress.

This organization is the highest authority in matters of hygiene in existence to-day.

Through the courtesy of the United States Government the dental profession of this country has received an invitation to contribute to the success of the coming Congress. A place has been made for representatives of the dental profession, both upon the literary program and among the exhibitors. This is the first time that the dental profession of this country has received such recognition by the home government.

The opportunity for which we have been seeking, that is, the opportunity to show the important relation the human mouth bears to the health, strength and welfare of mankind, is now before us.

The influence of this Congress is worldwide in its scope, and will be visited by thousands upon thousands of people who are interested in hygiene and the general welfare of mankind.

If American dentistry is to maintain its reputation throughout the world, it behooves the members of the profession of this country to unite in a general effort to have the largest, finest and most instructive dental exhibit in the history of dentistry assembled on this occasion.

At the request of the Oral Hygiene Committee of the National Dental Association, Dr. J. W. Schereschewsky, U. S. P. H. and M. H. S., Director of the Exhibition, has set aside 1,000 square feet of floor and 500 square feet of wall space in the building, which is being erected for the exhibits, to be devoted for the use of the dental profession for exhibit purposes.

At the meeting of the Oral Hygiene Committee of the National Dental Association, held in Cleveland, March 23, 1912, a resolution was passed inviting the Oral Hygiene Committees of all State and local organizations to co-operate with it in making a success of this exhibit. Space will be assigned in such a manner that each State, city and town will receive full credit for contributions in this direction.

The committee earnestly requests that every member of the profession, who is interested in mouth hygiene and the welfare of the dental profession, become actively interested in a campaign to make a success of this exhibit. The Oral Hygiene Committee of the State Dental Societies should endeavor to place themselves in touch with local organizations in their States in an endeavor to secure aid in the way of material suitable for exhibits and in money to defray the expenses of such an exhibit as this should be. The committee would ask that each State and local organization make appropriations to meet the expense of collecting, mounting and displaying such material as would make a creditable exhibit.

The committee requests that the Oral Hygiene Committees that can, or will, take part in this exhibit communicate at once, or at the earliest possible moment with Dr. W. G. Ebersole, Chairman of the Oral Hygiene Committee of the National Dental Association, 800 Schofield Building, Cleveland, Ohio, or, for local information, to Dr. W. Smith Frankland, The Burlington, Washington, D. C., Assistant Secretary-Treasurer of the National Mouth Hygiene Association for the District of Columbia.

The Oral Hygiene Committee of the National Dental Association instructed its secretary, Dr. Waldo E. Boardman, of Boston, Mass., to

communicate with Dr. William H. Porter, of Boston, Mass., with a view of obtaining some idea of the dental exhibit which was shown at the International Hygiene Exhibition in Dresden, May-October, 1911. Dr. Potter's letter is given herewith with a view of giving some idea of how to build or prepare an exhibit of this kind:

"BOSTON, April 13, 1912.

"DEAR DOCTOR BOARDMAN:

"In regard to the Dental Exhibit at the International Hygiene Exhibition in Dresden, May-October, 1911, I am obliged to rely on my memory in as much as I was unable to find a catalogue of this portion of the department. There were in the exhibit as follows:

"1. Large numbers of anatomical specimens. Skulls, parts of skulls with teeth in place. In this respect it was similar to the exhibition in connection with the 5th International Dental Congress at Berlin, 1909.

"2. Orthodontia cases represented by models. Regulating apparatus.

"3. Teeth representing the progress of decay from the initial softening to the large destructive cavity.

"4. Charts showing the percentage of dental decay amongst people of various occupations and living under various conditions.

"5. Charts showing the influence of food and water (hard or soft) upon the percentage of dental decay.

"6. Charts giving rules for the prevention of decay.

"7. School dental clinics. A description of the most important ones of Europe, with literature giving statistics and methods of work.

"8. The analysis of saliva. Charts showing the method employed.

"These are a few of the features. There were many more which I wish I could remember.

"Very truly yours,

"WILLIAM H. POTTER."

Let every member of the profession who is interested write offering to do his part. Do not wait for us to write to you, for we have much to do if we undertake to make a success of this work.

At the same meeting, the Oral Hygiene Committee of the National Dental Association passed a resolution inviting the dental colleges of this country to contribute to the success of the dental exhibit, and the secretaries or deans of the various colleges are requested to communicate either with Dr. W. G. Ebersole or Dr. W. Smith Frankland indicating what aid they will give in connection with the coming exhibit. The exhibit will be so arranged that each college will be assigned space for its own exhibit.

Come to our aid and give us your hearty support in this work.

Appealing to every member of the profession to become actively interested in this exhibit in the interest of the dental profession as a whole, we are,

Respectfully yours,

THE ORAL HYGIENE COMMITTEE
of
The National Dental Association.
W. G. EBERSOLE,
B. HOLLY SMITH,
WALDO E. BOARDMAN,
J. V. CONZETT,
S. W. FOSTER.

SOCIETY ANNOUNCEMENTS

West Virginia State Dental Society.

The sixth annual meeting of the West Virginia State Dental Society will be held in the assembly room of the Webster Springs Hotel, Webster Springs, W. Va., August 14, 15, 16, 1912; opening session at 2 o'clock Wednesday, August 14th.

The dentists of West Virginia, Virginia, Ohio and Maryland are especially invited, and a cordial invitation is extended to all ethical members of the profession.

FRANK L. WRIGHT, Secretary.

Wheeling, W. Va.

Northern Ohio Dental Association.

The Northern Ohio Dental Association will hold its next meeting at Cedar Point, June 11, 12, 13, 1912. An excellent program is assured. Not only the most prominent members of our own organization, but eminent clinicians from outside of the State will be present and take part.

Cedar Point is the finest watering and convention resort on Lake Erie. It has fine hotels and restaurants, a big convention hall, and is reached by direct boat from Toledo, Detroit and Cleveland, and by rail and electric via Sandusky. No more delightful place could be found to which to bring the ladies for a brief vacation.

C. D. PECK, Secretary.

Graham Bldg., Sandusky, Ohio.

North Dakota Board of Dental Examiners.

The next regular meeting of the North Dakota State Board of Dental Examiners will be held at Fargo, commencing Tuesday, July 9th, at 9 A. M., continuing through the 11th.

For application blanks and full particulars address

F. A. BRICKER, Secretary.

Fargo, No. Dak.

Massachusetts Board of Registration in Dentistry.

A meeting of the Massachusetts Board of Registration in Dentistry will be held in Boston June 5, 6, 7, 1912.

For applications and further information apply to

DR. G. E. MITCHELL, Secretary.

14 Water St., Haverhill, Mass.

ITEMS OF INTEREST

Vermont State Board of Dental Examiners.

The annual meeting of the Vermont State Board of Dental Examiners, for the examination of candidates for the practice of dentistry, will be held at the State House, Montpelier, July 1st, 2d and 3d, commencing at 2 o'clock P. M., July 1st.

For application blanks and full particulars, address the secretary.

GEORGE F. CHENEY, Secretary.

St. Johnsbury, Vermont.

Connecticut State Dental Commissioners.

The Dental Commissioners of the State of Connecticut hereby give notice that they will meet at Hartford on June 27, 28 and 29, 1912, to examine applicants for license to practice dentistry, and for the transaction of any other business proper to come before them. Application blanks, rules, etc., will be forwarded by the recorder upon request.

By order of the Commission.

D. EVERETT TAYLOR, Recorder.

Willimantic, Conn.

Institute of Dental Pedagogics.

At the last meeting of the Institute of Dental Pedagogics, the Executive Board decided to hold the next annual meeting in Pittsburgh, January 28th, 29th and 30th, 1913. The following officers were elected for the ensuing year:

President—Dr. H. Edmund Friesell, 1206 Highland Building, Pittsburgh, Pa.

Vice-President—Dr. D. H. Squire, Buffalo, N. Y.

Secretary-Treasurer—Dr. Fred W. Gethro, 917 Marshall Field Building, Chicago, Ill.

If you will kindly insert this notice in the next number of your journal, we will be greatly obliged.

Thanking you very kindly for this courtesy, and with best wishes, I am,

Yours very truly,

FRED W. GETHRO, Secretary.

New Dental Surgeons.

Following is a list of applicants for employment as acting dental surgeon, U. S. Army, who were successful at the examination held April 1, 1912:

Mortimer Sanderson, D.D.S., 1546 S. 53d Street, West Philadelphia, Pa., passed the examination held at West Point, N. Y. Dr. Sanderson was born in New York City December 5, 1885, and was graduated from the College of the City of New York with the class of 1905, receiving the degree of D.D.S.

Albert Raymond White, D.D.S., 26½ N. Sandusky Street, Delaware, Ohio, passed the examination held at Columbus Barracks, Ohio. Dr. White was born in Delaware County, Ohio, May 4, 1885, and was graduated from the Ohio Medical University with the class of 1906, receiving the degree of D.D.S.

Charles Blanchard Seely, D.D.S., Montgomery, Pa., passed the examination held at West Point, N. Y. Dr. Seely was born in Jersey Shore, Pa., March 26, 1886, and was graduated from the University of Pennsylvania with the class of 1908, receiving the degree of D.D.S.

Arthur Theodore Knoderer, D.D.S., 151 E. Broad Street, Columbus, Ohio, passed the examination held at Columbus Barracks, Ohio. Dr. Knoderer was born in Columbus, Ohio, April 2, 1888, and was graduated from the Sterling (Ohio) Medical College with the class of 1909, receiving the degree of D.D.S.

John William Scovel, D.D.S., R.F.D. No. 1, Box 58, San Diego, Cal., passed the examination held at Fort Logan, Colo. Dr. Scovel was born in Fort Madison, Iowa, October 21, 1885, and was graduated from the State University of Iowa with the class of 1906, receiving the degree of D.D.S.

Arnett Percy Matthews, D.D.S., 210 Swift Building, Pueblo, Colo., passed the examination held at Fort Logan, Colo. Dr. Matthews was born in Monett, Mo., September 2, 1886, and was graduated from the Western Dental College, class of 1911, receiving the degree of D.D.S.

William Archer Squires, D.D.S., Grand Junction, Colo., passed the examination held at Fort Logan, Colo. Dr. Squires was born near Atlantic, Cass County, Iowa, January 17, 1887, and was graduated from the University of Denver, Colo., class of 1910, receiving the degree of D.D.S.

Frank Coleman Cady, D.D.S., Fredonia, Kans., passed the examination held at Jefferson Barracks, Mo. Dr. Cady was born at Fredonia, Kans., September 9, 1888, and was graduated from the University of Michigan with the class of 1910, receiving the degree of D.D.S.

John Howard Snapp, D.D.S., 19 Gill Street, Columbus, Ohio, passed the examination held at Columbus Barracks, Ohio. Dr. Snapp was born in Washington, Ohio, February 19, 1889, and was graduated from the Sterling (Ohio) Medical College, class of 1911, receiving the degree of D.D.S.

Dental Laws Condensed.

Since the last edition of my booklet, entitled Dental Laws Condensed, or Dental License Requirements, I have heard again from the following kingdoms, islands, provinces, and states:

Alaska,
Algeria,
Alberta,
Argentine Republic,
Arabia,
Australia,
Austria,
Barbadoes,
Belgium,
Bermuda,
Brazil,
Bulgaria,
British Columbia,
British E. Africa,
British Guiana,
Canada,
Cape Colony,
Ceylon,
Costa Rica,
Cuba,
Denmark,
Dominican Republic,
Egypt,
England,
France,
Germany,
Greece,
Guatemala,
Hawaii,
Holland,
Hungary,
India,
Ireland,
Italy,
Jamaica,
Japan,
Liberia,
Malta,
Manitoba,
Mexico,
Morocco,
New Brunswick,
New Providence I.,
Netherlands,
Norway,
Nova Scotia,
Ontario,
Peru,
Porto Rico,
Portugal,
Prussia,
Quebec,
Roumania,
Russia,
Saskatchewan,
Saxony,
Scotland,
Servia,
Spain,
Sweden,
Switzerland,
Turkey,
U. S. of America,
Yukon,
Zanzibar.

One hundred and forty-five authorities officially representing as many governments in the world, have furnished me with information in regard to the credentials which a dentist must possess in order to practice dentistry in their respective countries. Over one hundred of this number have been heard from within the last sixty days.

The revised booklet (containing the latest authentic information) was published in April.

ALPHONSO IRWIN, D.D.S.

425 Cooper Street, Camden, N. J.